### Aim and Scope of NEUROSURGERY®

### Aim and Scope of OPERATIVE NEUROSURGERY®

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AIM AND SCOPE OF NEUROSURGERY®

Neurosurgery is the official publication of the Congress of Neurological Surgeons. The goal of Neurosurgery is to provide a medium for the prompt publication of scientific papers dealing with clinical or experimental neurosurgery, solicited manuscripts on specific subjects from experts, case reports, and other information of interest to neurosurgeons.

AIM AND SCOPE OF OPERATIVE NEUROSURGERY®

Operative Neurosurgery (ONS) is a quarterly stand-alone publication that complements the clinical and research studies published in Neurosurgery by featuring technical material that highlights operative procedures, anatomy, instrumentation, devices, and technology. ONS is the practical resource for cutting-edge material that connects the surgeon directly to the operating room.
EDITORIAL POLICIES

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FAQ for Open Access

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• Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
• Drafting the work or revising it critically for important intellectual content; AND
• Final approval of the version to be published; AND
• Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Each listed author should have made a major contribution to the conception or completion of the manuscript. Additionally, each author should be willing to share responsibility for the content of the submission. Please note:

• Honorary or guest authorship is not acceptable.
• Acquisition of funding and provision of technical services, patients, or materials, while they may be essential to the work, are not in themselves sufficient contributions to justify authorship.
• For Case Reports, written authorship justification should be included in the cover letter if the number of authors exceeds 4.

For more information, please visit the ICMJE’s position on the role of authors and contributors at http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html.

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Ethics

Human Subjects
Manuscripts that involve research conducted on human subjects must follow the principles outlined in the Declaration of Helsinki (http://www.wma.net/en/30publications/10policies/b3) and include a statement in the Methods section stating that the experimental protocol and informed consent were approved by the Institutional Review Board, and that all subjects gave informed consent. If IRB approval or patient consent was not sought or obtained, authors should include an explanation in the Methods section. Authors should indicate the mechanism used for reviewing the ethics of the research conducted in their cover letter.

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For more information on IRB related matters, please visit http://www.fda.gov/regulatoryinformation/guidances/ucm126420.htm.

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  2. The initial three digits of a zip code for all such geographic units containing 20,000 or fewer people is changed to 000;
- All elements of dates (except year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death; and all ages over 89 and all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 or older;
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- Fax numbers;
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- Social security numbers;
- Medical record numbers;
- Health plan beneficiary numbers;
- Account numbers;
- Certificate/license numbers;
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A few of the most commonly applicable reporting guidelines are outlined below. However, authors should consult the EQUATOR Network website (http://www.equator-network.org), which maintains a useful, up-to-date list of guidelines as they are published, with links to articles and checklists. It is the author's responsibility to ensure that their paper adheres to the appropriate reporting guideline and is properly formatted as such.


Authors should include in the Methods section a phrase indicating which reporting guideline has been implemented in their manuscript.

Note: For those papers that are accepted, the completed reporting guideline checklist will be published as Supplemental Digital Content. A phrase referencing the checklist will be inserted into the manuscript by the Production Editor.


**CONSORT (Consolidated Standards of Reporting Trials)**
Reports of randomized trials must conform to the revised CONSORT guidelines and should be submitted with their protocols and a completed CONSORT checklist. All reports of clinical trials must include a summary of previous research findings and explain how this trial affects this summary. Cluster randomized trials should be reported according to extended CONSORT guidelines. Randomized trials reporting harms must be described according to extended CONSORT guidelines. All reports of randomized trials should include a section entitled “Randomization and masking” within the methods section. For information regarding CONSORT guidelines, please visit http://www.consort-statement.org.

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Systematic reviews and meta-analyses must be reported according to PRISMA guidelines, an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses. The aim of the PRISMA Statement is to help authors improve the reporting of systematic reviews and meta-analyses. The PRISMA Statement consists of a 27-item checklist and a four-phase flow diagram. For information regarding PRISMA guidelines, please visit http://www.prisma-statement.org.

**MOOSE (Meta-Analysis of Observational Studies in Epidemiology)**
Systematic reviews and meta-analyses of observational studies should be reported according to MOOSE guidelines. The MOOSE guidelines are accessible via http://bit.ly/MOOSEstatement.

**STARD (Standards for the Reporting of Diagnostic Accuracy Studies)**
Investigators reporting studies of diagnostic accuracy should adhere to the STARD statement. The objective of the STARD initiative is to improve the accuracy and completeness of reporting of studies of diagnostic accuracy, to allow readers to assess the potential for bias in the study (internal validity) and to evaluate its generalizability (external validity). The STARD statement consists of a 25-item checklist and recommends the use of a flow diagram to describe the design of the study and the flow of patients. For information regarding STARD guidelines, please visit http://www.stard-statement.org.

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Observational research comprises several study designs and many topic areas. The STROBE statement should be used when reporting such research. The STROBE recommendations apply to the three main
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Necessary Files for Submission
- Cover Letter
- Title Page
- Manuscript (including abstract, main text, references and figure legends)
- Figure(s) (when appropriate)
- Table(s) (when appropriate)

The above items should be prepared as separate files. Each file must contain a file extension.

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Abstract
For article types requiring a structured abstract (not including Case Reports, Technical Case Reports, and Study Protocols), the abstract should be no more than 250 words, summarizing the problem being considered, how the study was performed, the salient results, and the principal conclusions under the following headings:

- **Background:** Address the background and rationale for the study.
- **Objective:** State the precise objective or study question addressed.
- **Methods:** Define the basic design, procedures, and/or setting in which the study was conducted.
- **Results:** Present significant data and observations gathered.
- **Conclusion:** Interpret findings and give principal conclusions.

Abstracts for Case Reports should be no more than 250 words and contain the following headings:

- **Background and Importance:** State the significance of the issue and importance of the case(s).
- **Clinical Presentation:** Define the case(s) presented, pertinent attendant issues, and observations.
- **Conclusion:** State outcome of case(s) and recommend treatment pathways.

Abstracts for Research-Human-Study Protocols should be no more than 250 words and should summarize all the key elements of the protocol under the following headings: Background; Objective; Methods; Expected Outcomes; Discussion.

Review (qualitative), Legacy-Institutions and People, Special Article, and Surgical Video article types require an unstructured abstract of no more than 250 words.

Keywords/Running Title
On the same page, provide a running title (short title) of 3 to 5 words, and list, in alphabetical order, keywords (maximum of 7) for coding and indexing. Consult the Index Medicus for appropriate keywords.

Manuscript Subheadings
Research

- **Introduction:** Brief description of the background that led to the study (current results and conclusions should not be included).
- **Methods:** Details relevant to the conduct of the study. Wherever possible give numbers of subjects studied (not percentages alone). Statistical methods should be clearly explained at the end of this section.
- **Results:** Work should be reported in SI units. Undue repetition in text and tables should be avoided. Comment on validity and significance of results is appropriate but broader discussion of their implication is restricted to the next section. Subheadings that aid clarity of presentation within this and the previous section are encouraged.
- **Discussion:** The nature and findings of the study are placed in context of other relevant published data. Caveats to the study should be discussed. Avoid undue extrapolation from the study topic. If lengthy, please separate into sections with subheadings to enhance readability.
- **Conclusion:** Should restate the purpose of the study and primary empirical questions that were asked, and should restate the most significant findings. The conclusions should aid the reader in understanding the significance of the study in contributing to the base of knowledge about the subject.

Research articles that adhere to a reporting guideline (eg, STROBE, CONSORT, PRISMA) should include subheadings, particularly in the Results and Discussion, that address specific items listed in the associated checklist.

Case Report/Technical Case Report

- **Background and Importance:** State the significance/uniqueness of the case in relation to the existing literature. Why is it being reported?
- **Clinical Presentation:** Describe the clinical features of the case(s), and the pertinent observations (imaging, pathology operative findings as appropriate). When applicable, use subheadings for clarity. Brevity is essential.
Discussion: Discuss the relevant literature in the context of the current case. The discussion need not be exhaustive, and it should focus specifically on how the case differs from existing literature and what lessons can be gleaned from dissemination of its findings.

Conclusion: State outcome of case(s) and recommendations/lessons.

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Authors who are not native speakers of English who submit manuscripts to international journals often receive negative comments from referees or editors about the English–language usage in their manuscripts, and these problems can contribute to a decision to reject a paper. To help reduce the possibility of such problems, we strongly encourage such authors to take at least one of the following steps:

- Have your manuscript reviewed for clarity by a colleague whose native language is English.
- Use a service such as one of those listed below.
  - Editage: http://wkauthorservices.editage.com
  - Bioscience Writers: http://www.biosciencewriters.com
  - Inter-Biotec: http://www.inter-biotec.com
  - Write Science Right: http://www.writescienceright.com
  - The Charlesworth Group: http://www.charlesworthauthorservices.com/~CNS

- Note that the use of such a service is at the author’s own expense and risk and does not guarantee that the article will be accepted. NEUROSURGERY® Publications accepts no responsibility for the interaction between the author and the service provider or for the quality of the work performed.

Statistical Analysis
For manuscripts that report statistics, the Editor requires that the authors provide evidence of statistical consultation (or at least expertise); a biostatistician may review such manuscripts during the review process.

In the Methods section:
- Identify the statistical tests used to analyze the data.
- Indicate the prospectively determined $P$ value that was taken to indicate a significant difference.
- Cite only textbook and published article references to support your choices of tests.
- Identify any statistics software used.

In the Results section:
- Note that following the *AMA Manual of Style: A Guide for Authors and Editors, 10th Edition*. New York: Oxford University Press; 2007, page 889, the Journal does not use a zero to the left of the decimal point, because “…statistically it is not possible to prove or disprove the null hypothesis completely when only a sample of the population is tested ($P$ cannot equal 0 or 1, except by rounding).”
- Report actual $P$ values rather than thresholds: not just whether the $P$ value was above or below the significant-difference threshold. Example: write “$P = .18$,” not “$P > .05$” or “$P = NS$.”
- $P$ should be expressed to 2 digits for $P \geq .01$, because expressing $P$ to more than 3 digits does not add useful information. If $P < .001$, it should be expressed as $P < .001$, rather than $P < .0001$ or $P = .00001$ for example.
- If $P > .99$, $P = .999$ for example, it should be expressed as $P > .99$.

Abbreviations, Nomenclature and Symbols
These should conform to those found in the *AMA Manual of Style: A Guide for Authors and Editors, 10th Edition*. The use of standard international units is encouraged. Note: The use of nonstandard abbreviations is strongly discouraged. In accepted manuscripts, use of such abbreviations may cause a delay in the copyediting process.
NEUROSURGERY® ARTICLE TYPES

Research-Human-Clinical Studies
Research-Animal
Research-Laboratory

These represent a substantial body of laboratory or clinical work. Additional data may be presented as supplementary information, which will be published online should the article be accepted. A structured abstract of no more than 250 words is required. Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material). For observational epidemiological studies and diagnostic accuracy studies, see Research Reporting Guidelines for further requirements.

Research-Human-Study Protocols

Study Protocols describe proposed or ongoing research, and provide a detailed account of the hypothesis, rationale, and methodology of the planned study. The journal will consider Study Protocols of proposed or ongoing trials (provided they have not completed patient recruitment at the time of submission).

Study Protocols will usually be published without further peer review if the study has received institutional IRB and ethics approval, and peer-review and grant funding from a major extramural funding body. We are unable to consider Study Protocols without ethics or IRB approval or major extramural funding at the time of submission. All clinical trials must be registered at an appropriate online public registry, and registration information should be included with the submission.

Examples of major funding agencies including, but not limited to:
- Academy of Finland (Finland)
- BIOTEC (Thailand)
- California Institute for Regenerative Medicine (US)
- Canadian Institutes of Health Research (Canada)
- Centre National de la Recherche Scientifique (France)
- Consejo Superior de Investigaciones Cientificas (Spain)
- Consiglio Nazionale delle Ricerche (Italy)
- Danmarks Grundforskningsfond (Denmark)
- Deutsche Forschungsgemeinschaft (Germany)
- FAPESP (Brazil)
- Fondazione Telethon (Italy)
- Fonds zur Forderung der wissenschaftlichen Forschung (Austria)
- Fonds voor Wetenschappelijk Onderzoek (Belgium)
- Health Research Board (Ireland)
- Howard Hughes Medical Institute (US)
- Indian Council of Medical Research (India)
- INSERM (France)
- International Human Frontier Science Program Organization (International)
- Israel Science Foundation (Israel)
- Max Planck Society (Germany)
- Medical Research Council (UK)
- National Health Service (UK)
- National Institutes of Health (US)
- National Science Foundation (US)
- Natural Environment Research Council (UK)
- Nederlandse Organisatie voor Wetenschappelijk Onderzoek (Netherlands)
- Rockefeller Foundation (US)
- South African Medical Research Council (South Africa)
- Swedish Foundation for Strategic Research (Sweden)
- Swedish Research Council (Sweden)
- Swiss National Science Foundation (Switzerland)
- Wellcome Trust (UK)

Study Protocols accepted for publication will be citable and accessible online and in print. Investigators must consent in principle to submit all or a substantial portion of the primary manuscript to Neurosurgery at the conclusion of the study, which the Journal will send for peer-review. The Journal will provisionally commit to rapidly
publish the main clinical findings of the study absent major deviations from protocol, poor reporting or over-interpreta-

tion of data, loss of originality, or undue delay after the planned submission date. The Journal will continue to accept for

consideration manuscripts whose protocols have not been previously submitted to Neurosurgery.

Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material).

For protocols of randomized controlled trials, see Research Reporting Guidelines for information regarding CONSORT.

Study Protocols should include the following information arranged according to these subheadings:

**Abstract:** The abstract should be no more than 250 words and should summarize all the key elements of the

protocol including the rationale, objectives, methods, populations, time frame, and expected outcomes under the

following subheadings: **Background; Objective; Methods; Expected Outcomes; Discussion.**

**General Information:**

Protocol title, protocol identifying number (if any), and date.

Name and address of the sponsor/funding agency.

Name and title of the investigator(s) responsible for conducting the research, and the address and telephone

number(s) of the research site(s), including responsibilities of each.

Name(s) and address(es) of the clinical laboratory(ies) and other medical department(s) or institutions involved

in the research.

**Rationale and Background Information:** The rationale specifies the reasons for conducting the research in light

of extant knowledge. It should include a statement of the question, issue, or problem that forms the basis of the

project, the etiology of this problem, and its possible solutions. It should put the proposal in proper context. It

should answer the question of why and what: why the research needs to be done and what will be its relevance.

**Study Goals and Objectives:** Goals are broad statements of what the proposal hopes to accomplish. Specific

objectives are statements of the research question(s). Objectives should be straightforward, simple, and specific. They should be stated as bullets points or enumerated.

**Study Design:** The design of the study should include information on the type of study, the research population

or the sampling frame, inclusion and exclusion criteria, withdrawal criteria, and the expected duration of the

study, etc. For example, a study may be described as basic science research, epidemiological research,

observational, or interventional; if observational, it may be either descriptive or analytic, if analytic it could

either be cross-sectional or longitudinal. If experimental, it may be described as a controlled or a non-controlled

study.

**Methodology:** This should include the design of the study, the setting, the type of participants or materials

involved, a clear description of all interventions (including a description of the drug/device that is being tested),

comparisons to be made, procedures to be used, measurements to be taken, observations to be derived,

laboratory investigations to be collected, and the type of analysis used, including a power calculation if

appropriate. Interventions could also be in the realm of epidemiology or outcomes sciences (eg, surveys).

Standardized or previously documented procedures and techniques should be described and appropriately

referenced. Instruments that are to be used to collect information (questionnaires, case report forms, etc) may

be provided as supplemental material at the discretion of the author. In the case of a randomized controlled

trial, additional information on the process of randomization and blinding, description of stopping rules for

individuals, for part or entirety of the study, the procedures and conditions for breaking the codes, etc, should

also be described.

A graphic outline of the study design and procedures using a flow diagram must be provided. This should

include the timing of assessments.

**Discussion:** This can include discussion of any practical or operational issues involved in performing the study,

and any other issues linked to the study that do not fall within the previous headings.
**Trial Status:** Investigators should inform the journal of the status of their study at the time of submission. The journal will consider study protocol articles for proposed or ongoing trials provided they have not completed patient recruitment at the time of submission.

**Safety Considerations:** Safety aspects should be provided in the protocol on how the safety of research participants will be ensured. This can include procedures for recording and reporting adverse events and their follow-up, for example.

**Follow-up:** The research protocol must give a clear indication of what follow-up will be provided to the research participants and for how long. This may include a follow-up especially for adverse events, even after data collection for the research study is completed.

**Data Management and Statistical Analysis:** The protocol should provide information on how the data will be managed, including data handling and coding for computer analysis, monitoring, and verification. The statistical methods proposed for the analysis of data should be clearly outlined, including reasons for the sample size selected, power of the study, level of significance to be used, procedures for accounting for any missing or spurious data, etc. For projects involving qualitative approaches, specify in sufficient detail how the data will be analyzed.

**Quality Assurance:** The protocol should describe the quality control and quality assurance system for the conduct of the study, including GCP, follow-up by clinical monitors, DSMB, data management, etc.

**Expected Outcomes of the Study:** The protocol should indicate how the study will contribute to advancement of knowledge and how the results will be utilized, not only in publications but also how they will likely affect health care, health systems, or health policies.

**Duration of the Project:** The protocol should specify the time that each phase of the project is likely to take, along with a timeline for each activity to be undertaken.

**Project Management:** This section should briefly describe the role and responsibility of each member of the team.

**Ethics:** The protocol should have a description of ethical considerations relating to the study. This section should state the issues that are likely to raise ethical concerns. It should also describe the informed consent process.

**Research-Human-Clinical Trials**
In these studies, individuals are randomly allocated to receive or not receive a preventive, therapeutic, or diagnostic intervention and then followed up to determine the effect of the intervention. Each manuscript should clearly state an objective or hypothesis; the design and methods (including the study setting and dates, patients or participants with inclusion and exclusion criteria, or data sources, and how these were selected for the study); the essential features of any interventions; the main outcome measures; the main results of the study; a comment section placing the results in context with the published literature and addressing study limitations; and the conclusions. Trial registration information (name, number, and URL) must be included with the submission. See Clinical Trial Registration for further information regarding the Journal’s requirements for registering clinical trials. A structured abstract of no more than 250 words is required. Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material). For randomized controlled trials, see Research Reporting Guidelines for information regarding CONSORT.

**Review**
Reviews are balanced accounts of all aspects of a particular subject including the pros and cons of any contentious or uncertain aspect. Qualitative reviews should include an unstructured abstract of no more than 250 words. A structured abstract is required for quantitative reviews. Maximum length: 3,500 words of text (not including abstract, references, figures, tables, and online-only material) with no more than a total of 100 references. For systematic reviews and meta-analyses, see Research Reporting Guidelines for information regarding PRISMA and MOOSE.
Case Report
Please be aware that *Neurosurgery* accepts a very small percentage of submitted case reports and publishes a limited number in each issue. Consequently, review time and time to publication are extended. Case reports must show an unusual clinical development, or a new insight into a well recognized clinical problem. A case report should have an educational message and provide evidence of how the case contributes to our understanding of the condition/treatment. Case reports that do not satisfy these requirements will be rejected without peer review.

*Important Note:* case reports appear in print as a truncated version with the abstract and selected figures only. Full text, references, and figures are reproduced online at [http://www.neurosurgery-online.com](http://www.neurosurgery-online.com).

A structured abstract of no more than 250 words is required. Maximum length: 1,200 words of text (not including abstract, references, figures, tables, and online-only material).

Abstracts for Case Reports contain the following headings:
- **Background and Importance:** State the significance of the issue and importance of the case(s).
- **Clinical Presentation:** Define the case(s) presented, pertinent attendant issues, and observations.
- **Conclusion:** State outcome of case(s) and recommend treatment pathways.

Legacy-Institutions and People
Special Article
These papers may address virtually any important topic in medicine, public health, research, ethics, health policy, or health law and generally are not linked to a specific article. Legacy and Special Articles should include an unstructured abstract of no more than 250 words. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

Letter to the Editor
Letters discussing a recent *Neurosurgery* article or a topic of neurosurgical interest not necessarily related to a published article can be submitted. They should be submitted online via [http://www.editorialmanager.com/neu](http://www.editorialmanager.com/neu). Letters must not duplicate other material published or submitted for publication and should not include unpublished data. *Important Note:* Letters to the Editor are indexed in the journal Table of Contents; however, the text is only available online at [http://www.neurosurgery-online.com](http://www.neurosurgery-online.com). Maximum length: 1,000 words of text (not including references, figures, tables, and online-only material).

Response to Letter to the Editor
Corresponding authors are invited by the Editorial Office to submit a Response to Letter to the Editor upon receipt of a Letter to the Editor regarding their article in *Neurosurgery*. Response letters must not duplicate other material published or submitted for publication and should not include unpublished data. *Important Note:* Responses to letters to the editor are indexed in the journal Table of Contents; however, the text is only available online at [http://www.neurosurgery-online.com](http://www.neurosurgery-online.com). Maximum length: 1,000 words of text (not including references, figures, tables, and online-only material).

Commentary
Commentaries are invited at the discretion of the editor and can be a brief communication on a subject pertinent to the field. Commentaries may also be invited from a selected reviewer or reviewers once a paper has been accepted for publication. The goal of a commentary in the latter case is to enrich the reader’s understanding of the manuscript by highlighting a particular aspect of the given paper or to offer an alternative perspective on the contents reported. *Important Note:* Commentaries are published in print or online only at the discretion of the Editor-in-Chief. Maximum length: 1,000 words of text (not including references, figures, tables, and online-only material).
Editorial
Editorials are invited essays written and submitted by a member of the editorial board. Editorials are used as a venue for members of the editorial board to express their views on an issue timely to the neurosurgery community. These are solicited by the Journal. Maximum length: 3,000 words of text (not including references, figures, tables, and online-only material).

Guest Editorial
Guest editorials are invited essays written and submitted by a member of the neurosurgery community. Guest editorials are used as a venue for the author to express his or her views on an issue timely to the neurosurgery community. These are solicited by the Journal. Questions may be directed to neurosurgerypubs@cns.org. Maximum length: 3,000 words of text (not including references, figures, tables, and online-only material).

Editor-in-Chief Registrar
The Registrar is an article type reserved specifically for communications from the Editor-in-Chief to the Journal readership. The Editor-in-Chief may use this as a venue to provide updates on the Journal and its features or to communicate his or her views on a subject timely to the neurosurgery community.

Book Review
Reviews of books and new media are invited by the Editor. Questions may be directed to neurosurgerypubs@cns.org. Maximum length: 1,000 words of text (not including references).

Cover Essay
A cover essay is an invited submission based on the journal cover art. The goal of this essay is to illuminate the image that appears on the cover of the Journal. These essays will be solicited by the editor and those solicited may include the author of the paper from which a cover image was selected, the artist who created the cover image, or an author whom the editor feels can provide insight into the cover art. Maximum length: 3,000 words of text (not including references, figures, tables, and online-only material).

Journal Club
*Neurosurgery’s* Journal Club extends the existing practice of Journal Club common to all neurosurgical training programs where resident and fellows critically review published articles under the guidance of faculty. Journal Club submissions will comprise a scholarly review written by neurosurgical residents/fellows based on top-ranked articles recently published in *Neurosurgery*.

**Competition and Eligibility**
Journal Club articles are chosen from among the top-downloaded *Neurosurgery* articles of the previous calendar quarter. Programs will be notified by email and on the journal website of upcoming articles selected for Journal Club review 3 months ahead of the deadline for submission for competitive review.

Quarterly, the best Journal Club review, adjudged by our dedicated Journal Club Review Panel, will be published in the print edition of *Neurosurgery*, and the “winning” program and institution will be prominently highlighted in the Table of Contents. The 4 runner-up reviews will be featured online at [http://www.neurosurgery-online.com](http://www.neurosurgery-online.com).

Current neurosurgery residents and fellows in any North American Neurosurgery ACGME accredited program may contribute to Journal Club reviews. We particularly encourage submissions that reflect the participatory nature of the traditional journal club setting familiar to all programs. Thus, faculty guidance and participation are appropriate, but the work must be done by the residents/fellows. Authors of Journal Club submissions may not be from the same institution or have any real or apparent conflict of interest with the authors of the Journal Club article being reviewed.
Format
Journal Club submissions should provide a thoughtful critical review of the elements in the article, rather than simply rehashing the paper, and should focus on the most important results. To maintain uniformity and for ease of adjudication, we have outlined a strict format. Comments must be accurate, well reasoned, and scholarly. Maximum length: 2,000 words of text with no more than a total of 5 references. Figures and tables are not permitted.

Journal Club reviews must include all of the following 11 components:

- Significance/Context and Importance of the Study
- Originality of the Work
- Appropriateness of the Study Design or Experimental Approach
- Adequacy of Experimental Techniques
- Soundness of Conclusions and Interpretation
- Relevance of Discussion
- Clarity of Writing, Strength and Organization of the Paper
- Economy of Words
- Relevance, Accuracy and Completeness of Bibliography
- Number and Quality of Figures, Tables and Illustrations
- Future/Next Steps

Journal Club Commentary
Corresponding authors are invited by the Editorial Office to submit a Response to Journal Club upon acceptance of a winning Journal Club article regarding their original article in Neurosurgery. Responses to Journal Club must not duplicate other material published or submitted for publication and should not include unpublished data. Maximum length: 1,000 words of text (not including references).

Science Times
Published six times a year and written exclusively by panel members, Science Times articles provide timely reviews of significant new scientific papers that are relevant to the field of neurosurgery. Topics span basic neuroscience, clinical neuroscience, neurotechnology, and health care research. The purpose of Science Times is to help maintain and broaden the common literacy necessary to translate new scientific knowledge into advances in the neurosurgical clinic and operating room.
OPERATIVE NEUROSURGERY® ARTICLE TYPES

Case Series
Case series (also known as a clinical series) is a type of study that tracks patients with a known exposure, such as patients who have received a similar treatment (e.g., surgical procedure) or examines their medical records for exposure and outcome. Case series may be consecutive or non-consecutive, depending on whether all cases presenting to the authors over a period were included, or only a selection. Case series have a descriptive study design; unlike studies that employ an analytic design (e.g., cohort studies, case-control studies, or randomized controlled trials). A structured abstract of no more than 250 words is required. Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material). See Research Reporting Guidelines for information regarding STROBE.

Complication
Complications are an inherent aspect of operative neurosurgery. These articles should consist of a description of a surgical (intraoperative or postoperative) complication that is unique in its occurrence or causation. It should include a concise clinical summary, images (diagnostic and intraoperative as appropriate) to illustrate the pertinent issues, and a scholarly discussion of the root cause analysis and how it could have been prevented in the reported case and similar cases that other surgeons and readers may encounter. A structured abstract of no more than 250 words is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

Concepts, Innovations and Techniques
These articles should present an experimental or innovative method, test or procedure. The tool or method described may be new or may be an update or adaptation of an existing one. The tool or method needs to have been tested, and while not necessarily outperforming existing approaches should show innovation in the approach or implementation. Authors must clearly acknowledge work upon which they are building, both published and unpublished. A structured abstract of no more than 250 words is required. Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material).

Instrumentation Assessment
Operative neurosurgery utilizes and continues to advance the use of novel and advanced techniques of operative instrumentation. This area of innovation covers a wide spectrum from software to hardware. The journal welcomes reports of advances in instrumentation. These should be accompanied by a candid assessment of their utility, their advantages, and limitations. The assessment should be comprehensive and balanced. Important and relevant issues such as the status of regulatory approval, cost considerations, and conflicts of interest should be adequately described. A structured abstract is required. Maximum length: 3,000 words of text (not including abstract, references, figures, tables, and online-only material).

Instrumentation and Technique
Operative Neurosurgery is particularly focused on the technical aspects of neurosurgery. Development of new instrumentation to solve operative problems may be reported as “Instrumentation and Techniques.” The paper should describe the specific instrumentation, what operative procedures it is designed to be used in, what problems it solves, and what improvements in the operative technique are made by the use of the instrumentation (operative time, safety, risk reduction, etc.). The report should be factual, supported by data, and original. Reports consisting solely of opinions or preferences will not be considered. Conflicts should be declared. A structured abstract of no more than 250 words is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).
Operative Nuances
Operative Neurosurgery is particularly focused on the technical aspects of neurosurgery. Surgical innovation in the form of new operative techniques to solve surgical problems has been an enduring aspect of the evolution of the specialty. Surgical pioneers are welcome to report modifications of operative techniques. The indications and application of the technique should be well described. A clear case for how the technique differs from existing operative technique should be made. Any supporting necessary instrumentation should be described. The report should be supported by illustrations, animations, video, or other multimedia to embellish the text. A structured abstract of no more than 250 words is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

Operative Technique
Operative Neurosurgery is particularly focused on the technical aspects of neurosurgery. Surgical innovation in the form of new operative techniques to solve surgical problems has been an enduring aspect of the evolution of the specialty. Surgical pioneers are welcome to report new operative techniques. Because of their novelty they will be considered as rapidly as possible and need not be accompanied by a full assessment as with a Technique Assessment. However, the indications and application of the technique should be well described. A clear case for how the technique differs from existing operative technique should be made. Any supporting necessary instrumentation should be described. The report should be supported by illustrations, animations, video, or other multimedia to embellish the text. A structured abstract of no more than 250 words is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

Review
Reviews are balanced accounts of all aspects of a particular subject including the pros and cons of any contentious or uncertain aspect. Qualitative reviews should include an unstructured abstract of no more than 250 words. A structured abstract is required for quantitative reviews. Maximum length: 3,500 words of text (not including abstract, references, figures, tables, and online-only material) with no more than a total of 100 references. For systematic reviews and meta-analyses, see Research Reporting Guidelines for information regarding PRISMA and MOOSE.

Surgical Anatomy and Technique
Surgical anatomy is the basis of operative technique. New information derived from anatomical dissections, imaging, or digital technology can augment the surgeon's knowledge and awareness of the operative field. Novel reports in this domain are welcome. A description of the pertinent anatomical revelations, the methods by which they were obtained, the operative technique(s) it augments, and pertinent data should form the basis of the report. The report should be supported by illustrations, animations, video, or other multimedia to embellish the text. A structured abstract is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

Surgical Video
The Journal welcomes 2-D and 3-D surgical video submissions of the following types:

- Microsurgery
- Endoscopy
- Clinical Scenarios
- Cadaver Dissections
- Simulation

All surgical videos should consist of a brief narrated PowerPoint presentation of the case including relevant preoperative imaging followed by a narrated surgical video illustrating the most important technical aspects of the surgical case. An unstructured abstract of no more than 250 words should accompany every surgical video. In print, an image of the video will appear alongside the abstract. A select panel of reviewers will evaluate submissions on video quality, narration quality, content, quality of the narrator, content teaching value, and interest to the Operative Neurosurgery audience.
Surgical video files should be submitted following these requirements:

- Accepted video file types include: .wmv, .mov, .flv, .qt, .mpg, .mpeg, and .mp4
- 3-D videos should be submitted as one single stereoscopic (left-right) video file.
- Video files should be formatted with a 320 x 240 pixel minimum screen size.
- Videos must include embedded audio narration in English.
- Video files should be less than 1 GB and should not exceed 10 minutes in runtime.
- Videos should not include manufacturer logos or commercial trademarks.
- Do not include author/institution information or “title page” slides in the video.
- Any text used in the video should be formatted using Arial font.
- Video files too large to upload in Editorial Manager may be alternately submitted as a URL for downloading (via a file transfer or cloud storage website, such as Dropbox) at the “Attach Files” step in Editorial Manager. In lieu of attaching the file, authors may select the “URL” option as the delivery method.
- 3-5 descriptive annotations designating the significant moments in the video must be provided during the submission process in Editorial Manager. Example provided below:
  
  0:10 - Placement of Patient
  1:00 - Incision
  3:00 - Procedure

**Technique Assessment**

*Operative Neurosurgery* is particularly focused on the technical aspects of neurosurgery. Surgical innovation in the form of new operative techniques to solve surgical problems has been an enduring aspect of the evolution of the specialty. Surgical pioneers are welcome to report new operative techniques with an accompanying assessment of the advantages and risks. The report should be factual, supported by data (clinical, anatomic, imaging or otherwise), objective, and original. Reports consisting solely of opinions or preferences will not be considered. A structured abstract of no more than 250 words is required. Maximum length: 2,500 words of text (not including abstract, references, figures, tables, and online-only material).

**Technical Case Report**

Technical Case Reports are case reports within the realm of operative neurosurgery. They may report an unusual clinical presentation of operative pathology, an unusual modification of operative or instrumentation techniques to address a one-off unique situation, or the occurrence of a hitherto unknown complication or previously unreported outcome.

*Important Note:* technical case reports appear in print as a truncated version with the abstract and selected figures only. Full text, references, and figures are reproduced online at [http://www.operativeneurosurgery-online.com](http://www.operativeneurosurgery-online.com).

A structured abstract of no more than 250 words is required. Maximum length: 1,200 words of text (not including abstract, references, figures, tables, and online-only material).

Abstracts for Technical Case Reports contain the following headings:

- **Background and Importance:** State the significance of the issue and importance of the case(s).
- **Clinical Presentation:** Define the case(s) presented, pertinent attendant issues, and observations.
- **Conclusion:** State outcome of case(s) and recommend treatment pathways.

**Letter to the Editor**

Letters discussing a recent *Operative Neurosurgery* article or a topic of neurosurgical interest not necessarily related to a published article can be submitted. They should be submitted online via [http://www.editorialmanager.com/ons](http://www.editorialmanager.com/ons). Letters must not duplicate other material published or submitted for publication and should not include unpublished data. *Important Note:* Letters to the Editor are indexed in the journal Table of Contents; however, the text is only available online at [http://www.operativeneurosurgery-online.com](http://www.operativeneurosurgery-online.com). Maximum length: 1,000 words of text (not including references, figures, tables, and online-only material).
Response to Letter to the Editor

Corresponding authors are invited by the Editorial Office to submit a Response to Letter to the Editor upon receipt of a Letter to the Editor regarding their article in Operative Neurosurgery. Response letters must not duplicate other material published or submitted for publication and should not include unpublished data. Important Note: Responses to letters to the editor are indexed in the journal Table of Contents; however, the text is only available online at http://www.operativeneurosurgery-online.com. Maximum length: 1,000 words of text (not including references, figures, tables, and online-only material).

Commentary

Commentaries are invited at the discretion of the editor and can be a brief communication on a subject pertinent to the field. Commentaries may also be invited from a selected reviewer or reviewers once a paper has been accepted for publication. The goal of a commentary in the latter case is to enrich the reader's understanding of the manuscript by highlighting a particular aspect of the given paper or to offer an alternative perspective on the contents reported. Important Note: Commentaries are published in print or online only at the discretion of the Editor-in-Chief. Maximum length: 1,500 words of text (not including references, figures, tables, and online-only material).

Editorial

Editorials are invited essays written and submitted by a member of the editorial board. Editorials are used as a venue for members of the editorial board to express their views on an issue timely to the neurosurgery community. These are solicited by the Journal. Maximum length: 1,500 words of text (not including references, figures, tables, and online-only material).

Guest Editorial

Guest editorials are invited essays written and submitted by a member of the neurosurgery community. Guest editorials are used as a venue for the author to express his or her views on an issue timely to the neurosurgery community. These are solicited by the Journal. Questions may be directed to neurosurgerypubs@cns.org. Maximum length: 1,500 words of text (not including references, figures, tables, and online-only material).

Editor-in-Chief Registrar

The Registrar is an article type reserved specifically for communications from the Editor-in-Chief to the Journal readership. The Editor-in-Chief may use this as a venue to provide updates on the Journal and its features or to communicate his or her views on a subject timely to the neurosurgery community.

Book Review

Reviews of books and new media are invited by the Editor. Questions may be directed to neurosurgerypubs@cns.org. Maximum length: 1,000 words of text (not including references).

Cover Essay

A cover essay is an invited submission based on the journal cover art. The goal of this essay is to illuminate the image that appears on the cover of the Journal. These essays will be solicited by the editor and those solicited may include the author of the paper from which a cover image was selected, the artist who created the cover image, or an author whom the editor feels can provide insight into the cover art. Maximum length: 1,500 words of text (not including references, figures, tables, and online-only material).
REFERENCES


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- All references cited in the text must be both listed and cited by the reference number (footnotes are not accepted).
- Each reference should be cited in the text, tables, or figures in consecutive numerical order by means of superscript arabic numerals. Use superscript numerals outside periods and commas, inside colons and semicolons. When more than 2 references are cited at a given place in the manuscript, use hyphens to join the first and last numbers of a closed series; use commas without space to separate other parts of a multiple citation (eg, As reported previously,1,3-8,19...The derived data were as follows5,8,12...)
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1 author  Doe JF.
2 authors  Doe JF, Roe JP III.
6 authors  Doe JF, Roe JP III, Coe RT Jr, Loe JT Sr, Poe EA, van Voe AE.
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