

The following guideline is no longer current and its recommendations may no longer be valid.

This document is provided for historical purposes only.

ARCHIVED: August 2024

Atraumatic (pencil-point) versus conventional needles for lumbar puncture: a clinical practice guideline

DISCLAIMER

For Informational Purposes Only: The information and contents offered in or in connection with the *Children's Oncology Group Supportive Care Endorsed Guidelines* (the "Guidelines") is provided only for informational purposes to children affected by cancer, their families and their health care providers. The Guidelines are not intended to substitute for medical advice, medical care, diagnosis or treatment obtained from doctors or other healthcare providers.

While the Children's Oncology Group tries to provide accurate and up-to-date information, the information in the Guidelines may be or may become out of date or incomplete. The information and guidelines may not conform to current standard of care, state-of-the art, or best practices for a particular disease, condition, or treatment. Some information in the Guidelines may be intended to be used by clinical researchers in special clinical settings or situations that may not apply to you, your child or your patient.

Special Notice to cancer patients and their parents and legal guardians: The Children's Oncology Group is a research organization and does not provide individualized medical care or treatment.

The Guidelines are not intended to replace the independent clinical judgment, medical advice, screening, health counseling, or other intervention performed by your or your child's doctor or other healthcare provider. Please do not rely on this information exclusively and seek the care of a doctor or other medical professional if you have any questions regarding the Guidelines or a specific medical condition, disease, diagnosis or symptom.

Please contact "911" or your emergency services for any health emergency!

Special Notice to physicians and other healthcare providers: This document is aimed specifically at members of the Children's Oncology Group or Member affiliates who have agreed to collaborate with the Children's Oncology Group in accordance with the relevant procedures and policies for study conduct and membership participation. Requirements and restrictions applicable to recipients of U.S. governmental funds or restrictions governing certain private donations may apply to the use and distribution of the Guidelines and the information contained herein.

The Guidelines are not intended to replace your independent clinical judgment, medical advice, or to exclude other legitimate criteria for screening, health counseling, or intervention for specific complications of childhood cancer treatment. The Guidelines provided are not intended as a sole source of guidance in the evaluation of childhood cancer patients. Nor are the Guidelines intended to exclude other reasonable alternative care. Specific patient care decisions are the prerogative of the patient, family and healthcare provider.

Warranty or Liability Assumed by Children's Oncology Group and Related Parties: While the Children's Oncology Group has tried to assure that the Guidelines are accurate and complete as of the date of publication, no warranty or representation, express or implied, is intended to be made in or with the Guidelines. No liability is assumed by the Children's Oncology Group or any affiliated party or member thereof for damage resulting from the use, review, or access of the Guidelines.

The “Atraumatic (pencil-point) versus conventional needles for lumbar puncture: a clinical practice guideline” developed by the MAGIC group and The BMJ was endorsed by the COG Supportive Care Guideline Committee in May 2019.

The source guideline is published (Rochweg B, Almenawer SA, Siemieniuk RAC, Vandvik PO, Agoritsas T, Lytvyn L, et al. BMJ 2018; 361:k1920.) and is available at:

<https://www.bmj.com/content/361/bmj.k1920> <https://www.bmj.com/content/361/bmj.k1920>

The purpose of the source clinical practice guideline is to create a recommendation on the type of needle (atraumatic versus conventional) that should be used when performing a lumbar puncture. The recommendation from the endorsed clinical practice guideline is presented in the table below.

Recommendation on atraumatic (pencil-point) versus conventional needles for lumbar puncture

RECOMMENDATION	Strength of Recommendation and Quality of Evidence*
Which needles should be used for lumbar puncture for any indication?	
We recommend the use of atraumatic over conventional needles in lumbar puncture for any indication in all patients (adults and children).	Strong recommendation Moderate to high quality evidence

*see Appendix 1

Appendix 1: Systems for Classifying Recommendations and Evidence used by the Source Clinical Practice Guidelines

I. GRADE

Strength of Recommendations:

Strong Recommendation	When using GRADE, panels make strong recommendations when they are confident that the desirable effects of adherence to a recommendation outweigh the undesirable effects.
Weak Recommendation	Weak recommendations indicate that the desirable effects of adherence to a recommendation probably outweigh the undesirable effects, but the panel is less confident.

Strength of Recommendations Determinants:

Factor	Comment
Balance between desirable and undesirable effects	The larger the difference between the desirable and undesirable effects, the higher the likelihood that a strong recommendation is warranted. The narrower the gradient, the higher the likelihood that a weak recommendation is warranted
Quality of evidence	The higher the quality of evidence, the higher the likelihood that a strong recommendation is warranted
Values and preferences	The more values and preferences vary, or the greater the uncertainty in values and preferences, the higher the likelihood that a weak recommendation is warranted
Costs (resource allocation)	The higher the costs of an intervention—that is, the greater the resources consumed—the lower the likelihood that a strong recommendation is warranted

Quality of Evidence

High Quality	Further research is very unlikely to change our confidence in the estimate of effect
Moderate Quality	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
Low Quality	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
Very Low Quality	Any estimate of effect is very uncertain

Guyatt, G.H., et al., *GRADE: an emerging consensus on rating quality of evidence and strength of recommendations*. BMJ, 2008; 336: 924-926.

Guyatt, G.H., et al., *GRADE: going from evidence to recommendations*. BMJ, 2008; 336: 1049-1051.