
Prevention of cisplatin-induced ototoxicity in children and adolescents with cancer: a clinical practice guideline

COG Supportive Care Endorsed Guidelines

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The clinical practice guideline “Prevention of cisplatin-induced ototoxicity in children and adolescents with cancer” developed by the Pediatric Oncology Group of Ontario were endorsed by the COG Supportive Care Guideline Committee in August 2020.

The source clinical practice guideline is published (Freyer DR, Brock PR, Chang KW, et al. Prevention of cisplatin-induced ototoxicity in children and adolescents with cancer: a clinical practice guideline. *Lancet Child Adolescent Health* 2020; 4(2): 141-50.) and is available open access at: [https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(19\)30336-0/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(19)30336-0/fulltext).

The purpose of the source clinical practice guideline is to address the clinical question: what adjuvant interventions should be offered in conjunction with cisplatin to prevent ototoxicity in children and adolescents with cancer?

Summary of Recommendations for Prevention of Cisplatin-induced Ototoxicity in Children and Adolescents with Cancer

RECOMMENDATIONS	Strength of Recommendation and Quality of Evidence*
1. Do not use amifostine for the prevention of cisplatin-induced ototoxicity in children and adolescents with cancer	Strong recommendation High quality evidence
2. Do not use sodium diethyldithiocarbamate for the prevention of cisplatin-induced ototoxicity in children and adolescents with cancer	Strong recommendation Low quality evidence
3. Use sodium thiosulfate for the prevention of cisplatin-induced ototoxicity in children and adolescents with non-metastatic hepatoblastoma	Strong recommendation High quality evidence
4. Consider sodium thiosulfate for the prevention of cisplatin-induced ototoxicity in children and adolescents with non-metastatic cancers other than hepatoblastoma	Weak recommendation Low quality evidence
5. We suggest sodium thiosulfate not be used routinely for the prevention of cisplatin-induced ototoxicity for children and adolescents with metastatic cancers	Weak recommendation Low quality evidence
6. Do not use intratympanic middle ear therapy for the prevention of cisplatin-induced ototoxicity in children and adolescents with cancer	Strong recommendation Low quality evidence
7. Do not alter cisplatin infusion duration, as a means in itself, to reduce ototoxicity in children and adolescents with cancer	Strong recommendation Low quality evidence

*see Appendix 1

Appendix 1: 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 or Conditional Recommendation	Weak or conditional recommendations indicate that the desirable effects of adherence to a recommendation probably outweigh the undesirable effects, but the panel is less confident.

Strength of Recommendation 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
Certainty in 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

Certainty in Evidence or Quality of Evidence

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