Medical Drug Clinical Criteria

Subject:	Pedmark (sodium thiosulfate injection)		
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Overview

This document addresses the use of Pedmark 125 mg/mL (sodium thiosulfate injection). Sodium thiosulfate interacts directly with cisplatin to produce an inactive platinum species. In addition, sodium thiosulfate can enter cells through the sodium sulfate cotransporter 2 and cause intracellular effects such as the increase in antioxidant glutathione levels and inhibition of intracellular oxidative stress. Both activities may contribute to the ability of sodium thiosulfate to reduce the risk of ototoxicity

The FDA approved indication for Pedmark is to reduce the risk of ototoxicity associated with cisplatin in pediatric patients 1 month of age and older with localized, non-metastatic solid tumors. Pedmark is not substitutable with other sodium thiosulfate products according to the manufacturer's label. The FDA label states Pedmark's limitation of use may be when cisplatin infusions are longer than 6 hours because of irreversible ototoxicity that may have already occurred.

Current strategies include modifications of treatment protocols and hearing tests during oncology treatment. In 2016 a Cochrane review concluded the data were insufficient to make any definite conclusions as to amifostine efficacy or lack thereof. The 2008 American Society of Clinical Oncology also concluded that the data were insufficient to support the routine use of amifostine to prevent cisplatin ototoxicity.

An international clinical practice guideline published in The Lancet (2019) summarized the following regarding the use of sodium thiosulfate in the prevention of ototoxicity due to cisplatin chemotherapy: "Regarding systemic sodium thiosulfate, the panel made a strong recommendation for administration in non-metastatic hepatoblastoma, a weak recommendation for administration in other non metastatic cancers, and a weak recommendation against its routine use in metastatic cancers. Amifostine, sodium diethyldithiocarbamate, and intratympanic therapy should not be routinely used. Cisplatin infusion duration should not be altered as a means to reduce ototoxicity. Further research to determine the safety of sodium thiosulfate in patients with metastatic cancer is encouraged." The panel did review the two trials (SIOPEL 6 and ACCL0431) used for the FDA approval of Pedmark as evidence regarding these recommendations for sodium thiosulfate.

Other Uses

The National Comprehensive Cancer Network® (NCCN) currently provides recommendations with a category 2A level of evidence for only the use of generic sodium thiosulfate (not interchangeable with Pedmark) as renal protection during hyperthermic intraperitoneal chemotherapy in ovarian cancer.

Definitions and Measures

Chemotherapy: Medical treatment of a disease, particularly cancer, with drugs or other chemicals.

Cytotoxic: Treatment that is destructive to cells, preventing their reproduction or growth.

Clinical Criteria

When a drug is being reviewed for coverage under a member's medical benefit plan or is otherwise subject to clinical review (including prior authorization), the following criteria will be used to determine whether the drug meets any applicable medical necessity requirements for the intended/prescribed purpose.

Pedmark (sodium thiosulfate injection)

Requests for Pedmark (sodium thiosulfate injection) may be approved if the following criteria are met:

I. Individual has a diagnosis of localized, non-metastatic solid tumor; **AND**
II. Individual is using to reduce the risk of ototoxicity associated with cisplatin; **AND**
III. Pedmark will be administered starting 6 hours after completion of cisplatin infusion, OR for multiday cisplatin regimens, Pedmark will be administered 6 hours after each cisplatin infusion but at least 10 hours before the next cisplatin infusion; **AND**
IV. Individual has a baseline serum sodium less than 145 mmol/L; **AND**
V. Individual is 1 month of age and older.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

HCPCS

J0208	Injection, sodium thiosulfate, 100 mg [pedmark]

ICD-10 Diagnosis

H91.01	Ototoxic hearing loss right ear
H91.02	Ototoxic hearing loss left ear
H91.03	Ototoxic hearing loss bilateral
H91.09	Ototoxic hearing loss unspecified ear

Document History

Reviewed: 11/15/2024
Document History:

- 11/15/2024 – Annual Review: No Changes. Coding Reviewed: No changes. Coding Reviewed: Delete ICD-10-CM D3A.00, D3A.01, D3A.02, D3A.09 and add ICD-10-CM H91.01, H91.02, H91.03, H91.09.
- 11/19/2023 – Annual Review: Minor wording and formatting update. Coding Reviewed: No changes. Effective 4/1/24 revised J0208 coding description.
- 11/18/2022– Select Review: Add new clinical criteria document for Pedmark. Coding reviewed: Added HCPCS J9999, J3490. All diagnoses pend. Effective 4/1/2023 Added HCPCS J0208. Removed HCPCS J9999, J3490. Added ICD-10-CM D3A.00-D3A.02, D3A.09.

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Federal and state laws or requirements, contract language, and Plan utilization management programs or polices may take precedence over the application of this clinical criteria.