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OTOTOXICITY SCREENING POLICY AND PROCEDURE

NCODA / Academy of Doctors of Audiology (ADA)

I. PURPOSE

To establish a standardized, multidisciplinary approach for educating, identifying, screening, monitoring, referring, and following patients at risk for ototoxicity associated with platinum-based chemotherapy and/or relevant radiation exposure. The goal is early recognition of auditory and vestibular change, timely clinical evaluation, and coordinated supportive care before symptoms significantly affect communication, safety, or quality of life.

Ototoxicity should not be described to patients as hearing loss alone. It may present across a spectrum that includes tinnitus (ringing, buzzing, or other sounds), subtle or high-frequency hearing changes, difficulty understanding speech—especially in background noise—muffled hearing, dizziness, vertigo, imbalance, or unsteadiness. Tinnitus or other subtle symptoms may be noticed before the patient recognizes a meaningful change in hearing.

II. POLICY

An ototoxicity screening and monitoring protocol will be incorporated into the clinical care plan for patients receiving cisplatin and, where included in the practice protocol, relevant cranial radiation therapy. Screening, patient education, documentation, referral, and follow-up will be completed according to the NCODA/ADA workflow below and the treating practice's clinical policies.

III. RESPONSIBILITY

Implementation requires shared ownership across the oncology and audiology care continuum. Participating roles may include Pharmacy, Nursing, Advanced Practice Providers (NPs/PAs), the Treating Oncologist, a Nurse Navigator/Care Coordinator, Audiology, and practice leadership/quality or EHR support as appropriate.

A. Ototoxicity Prevention Team / Practice Champions

Each practice should designate a small multidisciplinary Ototoxicity Prevention Team to champion adoption, define local workflows, resolve operational barriers, and monitor adherence. At minimum, the team should include an oncology clinical champion and representatives from nursing, pharmacy, care coordination/navigation, and audiology.

- Clinical champion (physician and/or APP): owns clinical adoption, supports escalation decisions, and reinforces the importance of screening and symptom reporting.
- Nursing champion: integrates patient education, the Hearing and Balance Questionnaire, and portable screening into chemotherapy teaching and treatment workflows.
- Pharmacy champion: supports identification of eligible/at-risk patients, treatment-plan review, and medication-related clinical coordination.
- Nurse Navigator/Care Coordinator: coordinates audiology scheduling, obtains outside reports, addresses insurance/network barriers, and closes the referral loop.
- Audiology partner: advises on testing standards, evaluates abnormal screens, provides diagnostic follow-up and rehabilitation recommendations, and communicates clinically meaningful changes back to oncology.
- Practice leadership/quality/EHR support, as available: builds standardized documentation, referral pathways, staff training, and audit/feedback processes.

The practice should identify a primary community audiologist/audiology practice and, when feasible, a backup option. Referral planning should account for insurance requirements, geographic access, appointment availability, and the ability to return reports promptly to the oncology team.

IV. PROCEDURE

A. Patient Identification and Risk Flagging

1. Pharmacy and/or the designated Ototoxicity Prevention Team member will use the EHR/treatment schedule to identify patients who will receive cisplatin and other therapies included in the local ototoxicity protocol, including relevant cranial radiation therapy.
2. Patients with higher cumulative exposure or other practice-defined risk factors should be clearly flagged for heightened monitoring. For example:
   - Greater than 120- 200 mg/m^2 cumulative cisplatin dose
     Or
   - >40-60 radiation grays
3. The identified patient list or EHR flag will be routed to Nursing/Care Coordination so baseline education and screening can occur without delaying treatment.

B. Patient Education and Baseline Screening

4. The treating physician and/or APP will introduce the risk of ototoxicity during treatment planning/consent. Nursing and/or the APP will reinforce this education during chemotherapy teaching and at appropriate points during treatment.
5. Patient education will explain that ototoxicity can affect both hearing and balance. Patients should be instructed to promptly report new or worsening tinnitus; ringing, buzzing, or other ear noise; difficulty hearing high-pitched sounds or understanding speech; muffled hearing; dizziness; vertigo; imbalance; or unsteadiness. Patients should be told not to wait for obvious hearing loss before reporting symptoms.
6. Baseline hearing screening will be completed by Nursing at chemotherapy consent or before the first platinum dose whenever operationally feasible, using the approved portable audiometry process. The baseline result serves as the patient-specific comparison for subsequent monitoring. Baseline screening to include:
   - Otoscopy
   - Hearing and Balance Questionnaire
   - Pure tone air conduction screening 1000Hz-16,000Hz using portable audiometer
7. If a baseline screen cannot be completed before treatment, the care team should obtain baseline/initial audiologic data as soon as clinically feasible and document the reason for delay.

C. Monitoring During Treatment

8. The Hearing and Balance Questionnaire will be completed before every dose of cisplatin.
9. Portable audiologic screening will be performed by Nursing according to the NCODA/ADA protocol, with additional testing triggered by new patient-reported symptoms or other clinical concern.
10. Screening and questionnaire results will be routed to the treating physician and/or APP for review and compared with baseline. Particular attention should be paid to changes at higher frequencies, where platinum-related ototoxic effects may first become detectable.
11. The Treating Oncology Provider (physician or APP) will review the screening and questionnaire results and monitor early changes from baseline.
    - If a patient has a 15 dB shift in threshold from baseline at any single frequency during subsequent screenings or reports tinnitus, vertigo, or balance changes, then the patient should be referred to a community audiologist and PEDMARK (sodium thiosulfate) should be considered to prevent permanent cochlear damage consistent with the NCCN recommendations.

D. Abnormal Screen / Symptom Escalation

Escalation should occur when the patient meets the NCODA/ADA threshold-shift criterion or reports a clinically meaningful auditory or vestibular change.

ESCALATION PATHWAY

Abnormal screen or new symptom → Nurse/performing staff notify physician or APP → Physician/APP reviews findings → Audiology referral is placed → Nurse Navigator/Care Coordinator schedules visit, addresses insurance/network issues, and obtains the report → Audiology communicates clinically meaningful findings → Oncology team determines treatment, supportive-care, rehabilitation, and otoprotective strategy as clinically appropriate.

12. The community audiologist will notify the treating oncology clinician promptly when changes from baseline require further audiologic evaluation or management.
13. For patients in whom an otoprotective agent is being considered, the oncology team will assess appropriateness based on current evidence, FDA labeling, guideline recommendations, treatment intent, and institutional policy. PEDMARK (sodium thiosulfate) is FDA-approved to reduce the risk of cisplatin-associated ototoxicity in pediatric patients 1 month of age and older with localized, non-metastatic solid tumors; the SOP should not imply an approved indication outside that population.

E. Care Coordination and Audiology Referral

14. The Nurse Navigator/Care Coordinator will coordinate the audiology appointment, confirm referral completion, obtain audiology reports, and ensure recommended follow-up is communicated to the treating oncology team.
15. When insurance or network restrictions require use of a specific audiology practice, Care Coordination will assist with authorization and redirect the referral as needed while maintaining the intended monitoring timeline.
16. The primary audiology partner and backup practice should have a defined process for urgent referrals, routine monitoring, report transmission, and points of contact for oncology questions.

F. Standardized EHR Documentation

To avoid fragmented documentation, practices should use a standardized EHR location, flowsheet, smart phrase, or structured note for ototoxicity monitoring. At minimum, document:

- Baseline hearing/audiologic status and date
- Hearing and Balance Questionnaire result/score
- Portable audiometry or audiology results, including comparison with baseline
- Patient-reported auditory and vestibular symptoms
- Patient/caregiver education provided and understanding confirmed
- Referral(s) placed and referral status
- Audiology report received/reviewed
- Clinical escalation, supportive-care actions, and follow-up plan

G. Communication and Patient Safety

Clinically meaningful hearing changes should be visible to all members of the care team because reduced auditory comprehension may create safety risks. At visits, clinicians should reduce background noise when possible, face the patient when speaking, confirm understanding using teach-back, reinforce important instructions in writing or through the patient portal, and encourage patients/caregivers to take notes or use appropriate communication supports.

V. POST-TREATMENT FOLLOW-UP

17. A full audiologic assessment will be completed by the community audiologist at approximately 3, 6, and 12 months after chemotherapy.
18. Follow-up should receive particular attention for patients with higher treatment exposure, greater noise exposure risk, abnormal testing during therapy, or patient-reported hearing, tinnitus, dizziness, vertigo, or balance changes.

19. Continue to reinforce communication-safety strategies at oncology follow-up visits because patients with hearing change may not receive or interpret verbal instructions as clearly as they did before treatment.
20. Patients with persistent hearing change or tinnitus should be referred to Audiology for continued monitoring and discussion of audiologic rehabilitation, which may include hearing aids or cochlear implant evaluation when clinically appropriate. Patients with persistent balance concerns or vertigo should be considered for vestibular evaluation and/or physical therapy as clinically appropriate.

VI. IMPLEMENTATION AND QUALITY REVIEW

The Ototoxicity Prevention Team should review implementation at defined intervals during rollout and thereafter as part of routine quality improvement. Suggested measures include the proportion of eligible patients receiving baseline education, baseline screening, scheduled questionnaires, completed audiology referrals, documented follow-up, and closed-loop communication of abnormal findings. The team should use missed screenings/referrals and workflow barriers to refine the local process rather than relying on individual staff memory.

VII. REFERENCES / SOURCE DOCUMENTS

- American Speech-Language-Hearing Association. Audiologic Management of Individuals Receiving Cochleotoxic Drug Therapy. Guidance includes baseline assessment before platinum therapy, serial monitoring, high-frequency attention, patient counseling, and post-treatment follow-up.
- American Speech-Language-Hearing Association. Ototoxicity Monitoring Protocol (platinum derivatives and cranial radiation).
- U.S. Food and Drug Administration. PEDMARK (sodium thiosulfate injection) Prescribing Information / Drugs@FDA. Verify the current label at the time of publication.
- NCCN guideline citation/hyperlink: insert and verify the exact disease- or supportive-care recommendation cited by the final NCODA/ADA protocol.