ISCO3/MET/00/22 Intraosseous Ozone Therapy (IOO3T)

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1. 1.0 Title

Intraosseous Ozone Therapy Technic.

1.1 Brief Background

Intraosseous ozone therapy (IOO3T) is a method where an oxygen-ozone mixture is administered directly into the intraosseous compartment of the bone. It is part of a broader method known as IntraBon. IOO3T targets the bone marrow, which maintains blood flow even during circulatory collapse, making it a valuable therapeutic and emergency access route. The technique is also gaining traction in regenerative medicine. The safety of the intraosseous route in general, and of the administration of various drugs, has been established in multiple studies.

1.2 Purpose

To define the procedure for safe and standardized administration of intraosseous ozone therapy for systemic or localized clinical applications, including pain management, tissue regeneration, and emergency vascular access.

1.3 Scope

This SOP is applicable to trained and certified ozone therapy practitioners and healthcare providers using the IOO3T technique in clinical or emergency settings

under ISCO3 guidance.

1.4 Acronyms, Abbreviations and Definitions

IOO3T: Intraosseous Ozone Therapy.
O3SS: Ozonated Saline Solution.
ASSO3®: Advanced Ozonated Saline Solution Device.
CPA: Cardiopulmonary Arrest.

2.0 Responsibility

Physician: Confirm indications and contraindications, obtain informed consent, supervise the procedure, and document outcomes.

Nurse: Prepare patient and materials, assist during the procedure, monitor vital signs, and report any adverse reactions.

3.0 Procedure

The procedure includes site selection, patient prep with local anesthesia (lidocaine 0.5%, 2 mL), needle insertion using the push-twist method, confirmation of medullary access via blood flash, and administration of ozonated saline as per dosing protocols.

3.1 Material Needed

- **Needle: 20–22G with stylet.**
- **Lidocaine 0.5%**
- **Ozonated saline in glass containers.**
- **ASSO3® device for nano/micro bubbling.**
- **Syringe, stopcock, infusion set, sterile drapes, gloves.**

3.2 Indications

- **Emergency vascular access during shock or CPA. If the patient is in a state of cardiorespiratory arrest (CRA), only three attempts at intravenous catheterization are permitted, provided they do not last longer than 1.5 minutes.**
- **Chronic pain syndromes (e.g., joint, spinal).**
- **Neurodegenerative and autoimmune diseases.**
- **Regenerative applications: fractures, AVN, osteonecrosis, osteoporosis.**
- **Segmental, systemic, or organ-specific IOT.**

3.3 Contraindications

- **Fracture or infection at the site.**
- **Severe osteoporosis, osteopetrosis.**

- **Osteogenesis imperfecta.**
- **Vascular injury or excessive adiposity.**
- **Reuse of previous IO site within 1–2 days.**

3.4 Advantages

- **Placement success rate: 94%.**
- **Placement takes less than 10 seconds.**
- **The needle is highly stable once inserted.**
- **Learning the technique is very simple, as, after adequate theoretical and practical training, more than 85% of students achieve puncture in less than 20 seconds.**

3.5 Recommended Doses

- **Low dose: 1 µg/kg**
- **Medium dose: 2 µg/kg**
- **High dose: 4–5 µg/kg**

For dose calculation consult ISCO3/MET/00/25 Ozonized Saline Solution (O3SS). Schwartz A. March 2025 https://isco3.org/wp-content/uploads/2025/04/ or 4th Madrid Declaration June 2025. Madrid Declaration on Ozone Therapy, ISCO3, 4th edition, 2025 https://share.google/QPK3yFKfvfg36YZwX

3.6 Frequency

- **Chronic conditions: every other day, 2–3 sessions.**
- **Acute infections: daily, 3–6 sessions.**

Administer via micro-bubbling using ASSO3® if available.

3.7 Clinical Evaluation

Verify indications, assess vitals, confirm diagnosis. Complete informed consent. Prepare ozonated saline under sterile conditions and assign the appropriate needle and anatomical site.

3.8 Preliminary Operations

- Sterile prep of site.

• Local anesthesia to periosteum.

• Assemble stopcock, syringe, infusion set.

• Saturate the saline solution with ozone.

• Ensure patient stability and readiness.

3.9 Main Procedure

• Identify site (e.g., Sternum, tibia, iliac crest, vertebral body).
• Insert spinal needle with stylet using push-twist motion.
• Confirm access with flashback.
• Remove stylet and attach syringe with O3SS.
• Infuse solution as per protocol.
• Remove needle within 24h; switch to IV route.

4.0 Alternatives

If ASSO3® unavailable, use conventional old fashion way of bubbling (15 minutes at a flow of 200 mL/min) and infuse at 120 drops/min. Volume 200-250 mL.

4.1 Possible Side Effects

• Localized pain.
• Swelling or discomfort.
• Hematoma.
• Rare: fat embolism, infection, extravasation, osteomyelitis, compartment syndrome.

4.2 Patient Follow-up

Monitor for signs of infection, inflammation, or treatment response. Recommend weekly evaluation for chronic protocols.

4.3 Contingencies and Corrective Actions

Abort the procedure in case of failed access or significant pain/bleeding. Report adverse events. Follow ISCO3 emergency protocols for ozone-related complications.

5.0 References

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6.0 Documentation and Attachments

6.1 Informed Consent

7.0 Change History

SOP no.	Effective Date	Significant Changes	Previous SOP no. 0022
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			02/01/2026

8.0 Document Records

	Name	Title	Final Date
Author	Schwartz A. Artamonov M.	Ginecologist. M.D.	
Co. Authors / Reviewer			
Authoriser / Approved	ISCO3 Board and members		02/03/2026