



## MULTISOCIETY PRACTICE ADVISORY (MAY 25, 2022)

# BEST PRACTICES FOR INTERVENTIONAL PAIN PROCEDURES DURING AN IODINATED CONTRAST MEDIA SHORTAGE

*Representatives of the Spine Intervention Society (SIS) and American Academy of Pain Medicine (AAPM) have convened to issue an expedited practice advisory providing immediate guidance during the current iodinated contrast media shortage to physicians who perform interventional pain procedures. This statement will be expanded in the coming weeks to include additional background information, evidentiary support, and to provide recommendations regarding appropriate use of iodinated contrast media for specific types of procedures. It will be shared widely with other medical specialty societies to invite comment, endorsement, and distribution.*

- Physicians should not draw directly from the same iodinated contrast media (ICM) vial for multiple patients due to infection risk as per Centers for Disease Control and Prevention (CDC) and Joint Commission guidelines [1].
- Only pharmacists may repackage ICM vials for multiple patients. This must be performed under strict, sterile conditions and only in times of critical need [1]. In such situations, physicians must adhere to the beyond-use-date and storage conditions on the repackaged label [2,3].
- Routine transforaminal epidural steroid injections (TFESI) and diagnostic spinal nerve blocks (SNB) at the level of L2 and above, atlanto-axial and atlanto-occipital joint injections, and sympathetic blocks using fluoroscopic guidance should be postponed if ICM is not available. Below the level of L2, TFESIs and SNBs also carry risk of unintended injection into a radiculomedullary artery, but the associated risks are less significant than at higher levels. Therefore, there may be situations in which it is acceptable to perform a TFESI/SNB below L2 without ICM.
- For TFESIs performed below L2 without ICM, only a non-particulate steroid (e.g., dexamethasone) should be utilized to protect against inadvertent ischemic events [4].
- Some procedures can be performed using alternative techniques that do not require ICM, such as stellate ganglion blocks under ultrasound guidance.
- If a procedure which is typically performed with ICM will be performed without it, the risks of performing the procedure without ICM should be discussed with the patient prior to the procedure and this discussion should be documented in the consent and/or medical record.
- If the decision is made to proceed without ICM for an interlaminar epidural steroid injection (ILES), where the risk of inadvertent dural puncture exists, or for other steroid injections where it is not necessary to include local anesthetic with the injectate, such as caudal epidural injections, physicians should consider omitting local anesthetic from the injectate to reduce the risks of off-target injection of local anesthetics. This is strongly recommended for cervical ILESs, where the risk of high-cervical spinal anesthesia exists.
  - o For ILES, consider the use of preservative-free, non-particulate steroid (e.g., dexamethasone) to prevent the possibility of arachnoiditis with inadvertent intrathecal injection [5].
- Gadolinium-based contrast agents (GBCA) should be avoided for any neuraxial procedures that also have a risk of unintended subarachnoid injection (such as ESIs), given the risk of catastrophic outcomes with intrathecal administration of GBCA [6].

***Physicians should carefully weigh the risks and benefits of performing procedures without ICM or using an alternative agent in the context of each unique patient's situation and should involve patients in shared decision making before proceeding.***

*Procedures should be performed following the [SIS Practice Guidelines](#) [7]. The physician should confirm placement of the needle in at least two imaging planes. Please refer to the SIS Practice Guidelines for the full details and standards related to each unique procedure.*

## References

- [1] <https://www.cdc.gov/injectionsafety/CDCposition-SingleUseVial.html>
- [2] <https://www.fda.gov/media/90978/download>
- [3] <https://www.ashp.org/-/media/assets/drug-shortages/docs/considerations-imaging-contrast-shortage-mgmt.pdf>
- [4] Rathmell JP, Benzon HT, Dreyfuss P, Huntoon M, Wallace M, Baker R, Riew KD, Rosenquist RW, Aprill C, Rost NS, Buvanendran A, Kreiner DS, Bogduk N, Fourney DR, Fraifeld E, Horn S, Stone J, Vorenkamp K, Lawler G, Summers J, Kloth D, O'Brien D Jr, Tutton S. Safeguards to prevent neurologic complications after epidural steroid injections: consensus opinions from a multidisciplinary working group and national organizations. *Anesthesiology*. 2015 May;122(5):974-84.
- [5] Spine Intervention Society. Position Statement: Best Practices for Epidural Steroid Injections in the Setting of a Preservative-Free Dexamethasone Shortage, 2019. [https://cdn.ymaws.com/www.spineintervention.org/resource/resmgr/patient\\_safety/2019\\_02\\_sis\\_dex\\_bestpractice.pdf](https://cdn.ymaws.com/www.spineintervention.org/resource/resmgr/patient_safety/2019_02_sis_dex_bestpractice.pdf)
- [6] Benzon HT, Maus TP, Kang HR, et al. The Use of Contrast Agents in Interventional Pain Procedures: A Multispecialty and Multisociety Practice Advisory on Nephrogenic Systemic Fibrosis, Gadolinium Deposition in the Brain, Encephalopathy After Unintentional Intrathecal Gadolinium Injection, and Hypersensitivity Reactions. *Anesth Analg*. 2021;133(2):535-552. doi:10.1213/ANE.0000000000005443
- [7] Bogduk N (ed). *Practice Guidelines for Spinal Diagnostic and Treatment Procedures*, 2nd edn. International Spine Intervention Society, San Francisco, 2013.