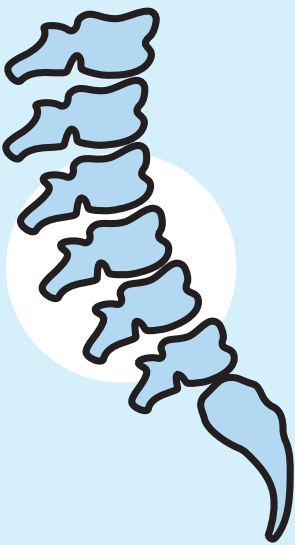


ASRA Pain Medicine Recommendations for Interventional Pain Procedures During Contrast Shortage

GENERAL RECOMMENDATIONS

- ▶ Risk stratify procedures that can be delayed until the supply resumes.
- ▶ Consider alternative forms of visualization (ie, ultrasound)
- ▶ If contrast medium is deemed necessary, utilize the lowest possible effective dose based on currently published guidelines.
- ▶ The use of gadolinium can be considered in non-neuraxial injections.
- ▶ Lumbar interlaminar epidural injections, sacroiliac and facet joint injections, lumbar medial branch blocks, and radiofrequency denervation can be performed without contrast.



Interlaminar or transforaminal epidural steroid injections:

- ▶ Lumbar interlaminar injections may be performed without contrast after careful consideration of the patient's clinical presentation, urgency for treatment, and careful review of imaging.
- ▶ If lumbar transforaminal epidural steroid injection (TFESI) is performed without the use of contrast, use of non-particulate steroid is recommended. Non-particulate steroid is recommended for all cervical TFESIs with or without contrast.
- ▶ A lumbar interlaminar paramedian/parasagittal approach, where contrast is not necessary, can be considered instead of lumbar TFESIs.
- ▶ Fluoroscopically guided cervical interlaminar or transforaminal epidurals should be delayed until iodinated contrast medium (ICM) is available.
- ▶ If experienced with ultrasound (US)-guided cervical procedures, one may consider US-guided cervical nerve root block instead of cervical transforaminal injection.



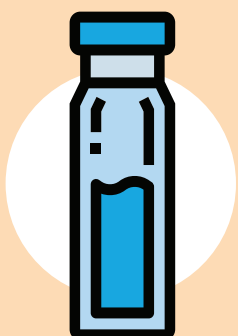
Cervical facet interventions:

- ▶ Cervical facet interventions may be performed without contrast after careful consideration of the patient's clinical presentation, urgency for treatment, and careful review of imaging.
- ▶ Alternatively, ultrasound guidance may be utilized when experience with this image modality is present. Non-particulate steroids are preferred for cervical facet joint injections.



Gadolinium-based contrast:

- ▶ Gadolinium-based contrast agents (GBCAs) should not be utilized in spine-related procedures in the absence or shortage of ICMs.
- ▶ Careful consideration should be taken in repeated use of GBCAs for non-spinal injections.



Can a single vial of ICM be used for multiple doses?

- ▶ Multidose dose vials should be utilized for single patients whenever possible.
- ▶ If a multidose vial is to be used for more than one patient, it is imperative to follow the United States Pharmacopeia (USP) 797 standard of practice as well as CDC. In addition, checking with state board of pharmacy or other regulatory body is recommended.