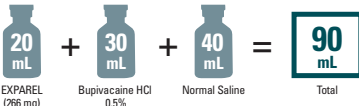


## Administration Case Report: Lumbar Decompression Using an ESP Block

This case report represents the individual experience of Dr Ravinder-Raj Bains, and is intended to demonstrate his methodology for using EXPAREL in patients undergoing a posterior 3-level lumbar decompression.

Pacira BioSciences, Inc. recognizes that there are alternative methodologies for administering local anesthetics, as well as individual patient considerations, when selecting the dose for a specific procedure.

EXPAREL is a local anesthetic that produces postsurgical analgesia in patients aged 6 years and older. It is administered via single-dose infiltration. When infiltrated into the surgical site, it produces local analgesia. It may also be infiltrated in the fascial plane to produce regional analgesia as a regional field block. Regional anesthetic techniques to produce regional analgesia include, but are not limited to, transversus abdominis plane (TAP) block, pectoralis (PEC) and serratus plane (SAP) blocks, erector spinae plane (ESP) block, and quadratus lumborum (QL) block. EXPAREL may also be administered as an interscalene brachial plexus nerve block in adults to produce postsurgical regional analgesia in total shoulder arthroplasty (TSA) and rotator cuff repair (RCR) procedures.

CASE INFORMATION	
Physician Name	Ravinder-Raj Bains, MD
Affiliation	Orthopedic Spine Surgery Chief, Regional Spine Surgery Kaiser Permanente Oakland, CA
Surgical Case Performed	Minimally invasive 3-level spinal unilateral laminectomy and bilateral decompression using unilateral exposure and muscle retraction
Inpatient or Outpatient Procedure	Outpatient
PATIENT CHARACTERISTICS	
Gender	Male
Age	67 years
Patient History and Characteristics	L4-L5 left-sided decompression 3 years ago. Patient presented with progressing neurogenic claudication after reinjuring area with heavy lifting
PROCEDURAL DETAILS	
Preoperative Medications Used	None
Intraoperative Medications Used	Local analgesics: EXPAREL, bupivacaine HCL Deep sedation: Propofol, Ketamine, Fentanyl, dexamethasone
Postoperative Medications Orders	Phenylephrine and tranexamic acid
Dose of EXPAREL and Total Volume Used	 <p>20 mL EXPAREL (266 mg) + 30 mL Bupivacaine HCl (0.5%) + 40 mL Normal Saline = 90 mL Total</p>

MAC=moderate anesthesia care.

The recommended dose of EXPAREL for adults is based on the size of the surgical site, the volume required to cover the area, and individual patient factors that may impact the safety of an amide local anesthetic. The maximum dose of EXPAREL should not exceed 266 mg. The maximum dose of EXPAREL for interscalene brachial plexus nerve in adults should not exceed 133 mg.

EXPAREL can be administered unexpanded (20 mL) or expanded to increase volume up to a total of 300 mL (final concentration of 0.89 mg/mL [ie, 1:14 dilution by volume]) with normal (0.9%) saline or lactated Ringer's solution.

Bupivacaine HCl (which is approved for use in patients ages 12 and older) may be administered immediately before EXPAREL or admixed in the same syringe, as long as the ratio of the milligram dose of bupivacaine HCl to EXPAREL does not exceed 1:2. Admixing may impact the pharmacokinetic and/or physicochemical properties of EXPAREL, and this effect is concentration dependent. The toxic effects of these drugs are additive and their administration should be used with caution, including monitoring for neurological and cardiovascular effects related of local anesthetic systemic toxicity. Other than with bupivacaine, EXPAREL should not be admixed with other drugs prior to administration.

**Please see Important Safety Information on the last page and refer to accompanying full Prescribing Information, which is also available at [www.EXPAREL.com](http://www.EXPAREL.com).**

## INFILTRATION NOTES



Dr Bains determined a total volume of 90 mL would be needed to cover the surgical site. He admixed 20 mL of EXPAREL® (bupivacaine liposome injectable suspension) with 30 mL of 0.5% bupivacaine HCl and 40 mL of normal saline before dividing the total volume into 3 needles of 30 mL each.

### PERFORMING AN ESP BLOCK

Prior to the incision for a 3-level decompression laminectomy, the ESP block is performed under fluoroscopy using a 20-gauge, 3.5-inch spinal needle.

Two needles are directed through the muscle until the needle contacts the lateral aspect of the transverse process. The first needle with 30 mL is injected on the right side through the paraspinal muscles from dorsal fascia at the L1 transverse process. The same is done on the left side with the second 30-mL needle.



FIGURE 1.



FIGURE 2.

### PROPER TECHNIQUE FOR SURGICAL INFILTRATION

Before closure, the last needle with 30 mL is injected within the fascia and subcutaneous tissue about 1 to 1.5 cm apart. This is repeated with 1 to 2 mL per injection around the periphery of the incision, including the incision, using a moving needle technique while withdrawing the needle.

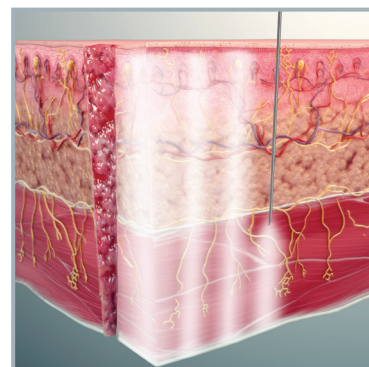


FIGURE 3.

## INFILTRATION NOTES (cont)

### ADDITIONAL EXAMPLES OF ESP BLOCKS PERFORMED UNDER FLUOROSCOPY



FIGURE 4.

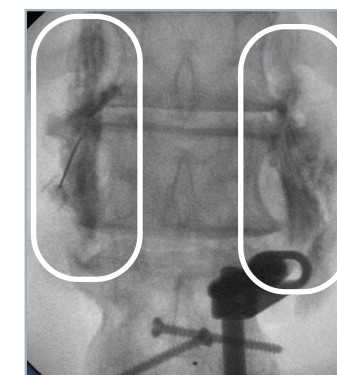


FIGURE 5.

## NOTES

## IMPORTANT SAFETY INFORMATION

### Important Safety Information

EXPAREL® (bupivacaine liposome injectable suspension) is contraindicated in obstetrical paracervical block anesthesia.

Adverse reactions reported in adults with an incidence greater than or equal to 10% following EXPAREL administration via infiltration were nausea, constipation, and vomiting; adverse reactions reported in adults with an incidence greater than or equal to 10% following EXPAREL administration via interscalene brachial plexus nerve block were nausea, pyrexia, and constipation.

Adverse reactions with an incidence greater than or equal to 10% following EXPAREL administration via infiltration in pediatric patients six to less than 17 years of age were nausea, vomiting, constipation, hypotension, anemia, muscle twitching, vision blurred, pruritus, and tachycardia.

If EXPAREL and other non-bupivacaine local anesthetics, including lidocaine, are administered at the same site, there may be an immediate release of bupivacaine from EXPAREL. Therefore, EXPAREL may be administered to the same site 20 minutes after injecting lidocaine.

EXPAREL is not recommended to be used in the following patient populations: patients <6 years old for infiltration, patients younger than 18 years old for interscalene brachial plexus nerve block, and/or pregnant patients.

Because amide-type local anesthetics, such as bupivacaine, are metabolized by the liver, EXPAREL should be used cautiously in patients with hepatic disease.

### Warnings and Precautions Specific to EXPAREL

Avoid additional use of local anesthetics within 96 hours following administration of EXPAREL.

EXPAREL is not recommended for the following types or routes of administration: epidural, intrathecal, regional nerve blocks **other than interscalene brachial plexus nerve block**, or intravascular or intra-articular use.

The potential sensory and/or motor loss with EXPAREL is temporary and varies in degree and duration depending on the site of injection and dosage administered and may last for up to 5 days, as seen in clinical trials.

### Warnings and Precautions for Bupivacaine-Containing Products

**Central Nervous System (CNS) Reactions:** There have been reports of adverse neurologic reactions with the use of local anesthetics. These include persistent anesthesia and paresthesia. CNS reactions are characterized by excitation and/or depression.

**Cardiovascular System Reactions:** Toxic blood concentrations depress cardiac conductivity and excitability, which may lead to dysrhythmias, sometimes leading to death.

**Allergic Reactions:** Allergic-type reactions (eg, anaphylaxis and angioedema) are rare and may occur as a result of hypersensitivity to the local anesthetic or to other formulation ingredients.

**Chondrolysis:** There have been reports of chondrolysis (mostly in the shoulder joint) following intra-articular infusion of local anesthetics, which is an unapproved use.

**Methemoglobinemia:** Cases of methemoglobinemia have been reported with local anesthetic use.

**Disclosure:** Dr Bains is a paid consultant for Pacira BioSciences, Inc.

**Full Prescribing Information is available at [www.EXPAREL.com](http://www.EXPAREL.com).**