

# EXPAREL<sup>®</sup>

(bupivacaine liposome injectable suspension)

## REDEFINE RECOVERY WITH LONG-LASTING NON-OPIOID POSTSURGICAL PAIN CONTROL

The first and only FDA-approved long-lasting analgesic proven safe for ages 6 and above



Available in 10 mL (133 mg) and 20 mL (266 mg) 1.3% concentration single-dose vials

EXPAREL is indicated to produce postsurgical local analgesia via infiltration in patients aged 6 years and older and regional analgesia in adults via an interscalene brachial plexus nerve block, sciatic nerve block in the popliteal fossa, and an adductor canal block. Safety and efficacy have not been established in other nerve blocks.

Please see Important Safety Information by tapping the ISI tab and full Prescribing Information at [www.EXPAREL.com](http://www.EXPAREL.com).

# DOSING FOR EXPAREL

## Local infiltration

**For adults**, a maximum dose of 266 mg (20 mL) is recommended, based on:

- Size of the surgical site
- Volume required to cover the area
- Individual patient factors that may impact the safety of an amide local anesthetic

**For pediatric patients aged 6 to less than 17 years**, dosing is weight based: 4 mg/kg (up to a maximum of 266 mg)

## Regional analgesia

**For interscalene brachial plexus nerve block** in adults, the recommended dose is 133 mg (10 mL), based on a study of patients undergoing RCR or TSA

**For adductor canal block in adults**, the recommended dose is 133 mg (10 mL) admixed with 50 mg (10 mL) 0.5% bupivacaine HCl, for a total volume of 20 mL, based on a study of patients undergoing TKA

**For sciatic nerve block in the popliteal fossa** in adults, the recommended dose is 133 mg (10 mL), based on a study of patients undergoing bunionectomy

### The 266 mg (20 mL) dose is appropriate for\*:



- **Abdominal/colorectal/general/urologic:** abdominal wall reconstruction, bariatric, colectomy, hernia, nephrectomy
- **Breast:** mastectomy, reconstruction
- **OB/GYN:** C-section, hysterectomy, myomectomy
- **Orthopedic:** fusions/fractures, THA, TKA
- **Spinal:** discectomy, fusions, laminectomy
- **Fascial plane blocks:** ESP, PECS I and II, QL, rectus sheath, TAP

### The 133 mg (10 mL) dose is appropriate for small anatomical areas, such as\*:



- **Facial/plastic**
- **Oral/maxillofacial**
- **Upper extremity:** interscalene brachial plexus nerve block
- **Lower extremity:** adductor canal block or sciatic nerve block in the popliteal fossa

C-section=cesarean section; ESP=erector spinae plane; OB/GYN=obstetrics/gynecology; PECS=pectoralis; QL=quadratus lumborum; RCR=rotator cuff repair; TAP=transversus abdominis plane; THA=total hip arthroplasty; TKA=total knee arthroplasty; TSA=total shoulder arthroplasty.

\*These are examples of procedures that typically require the above-referenced dose of EXPAREL. Please use your professional clinical judgment when determining the appropriate dose of EXPAREL for a given surgical procedure, and refer to the full Prescribing Information before using.

**Please see Important Safety Information by tapping the ISI tab and full Prescribing Information at [www.EXPAREL.com](http://www.EXPAREL.com).**

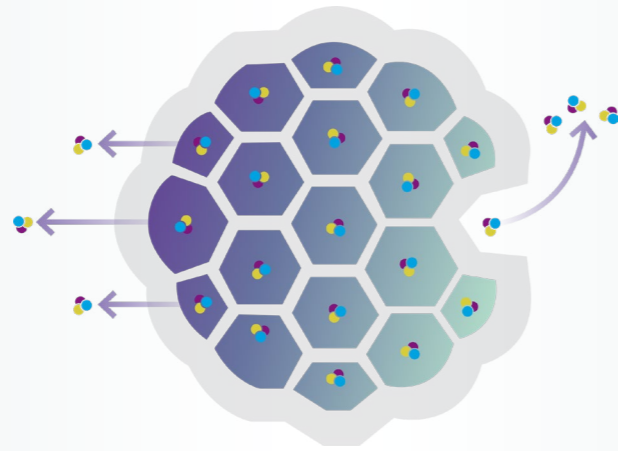
# ADMIX EXPAREL WITH BUPIVACAINE HCl\* TO ENSURE EARLY ANALGESIC ONSET

- The early onset of bupivacaine HCl bridges analgesic coverage with EXPAREL, which uses **proprietary multivesicular liposome (pMVL) technology** for reliable, slow release of bupivacaine

**DESIGNED**  
to deliver controlled levels of bupivacaine<sup>1</sup>

**COMPOSED**  
of naturally occurring, biocompatible lipids<sup>2-4</sup>

**pMVL technology**



**ENCAPSULATES**  
bupivacaine in a suspension of multivesicular liposomes

**RELEASES**  
bupivacaine over time<sup>1</sup>

- Bupivacaine HCl can be administered immediately before EXPAREL or admixed in the same syringe as part of the total expanded volume
- Ensure ratio of milligram dose of bupivacaine HCl to EXPAREL does not exceed 1:2

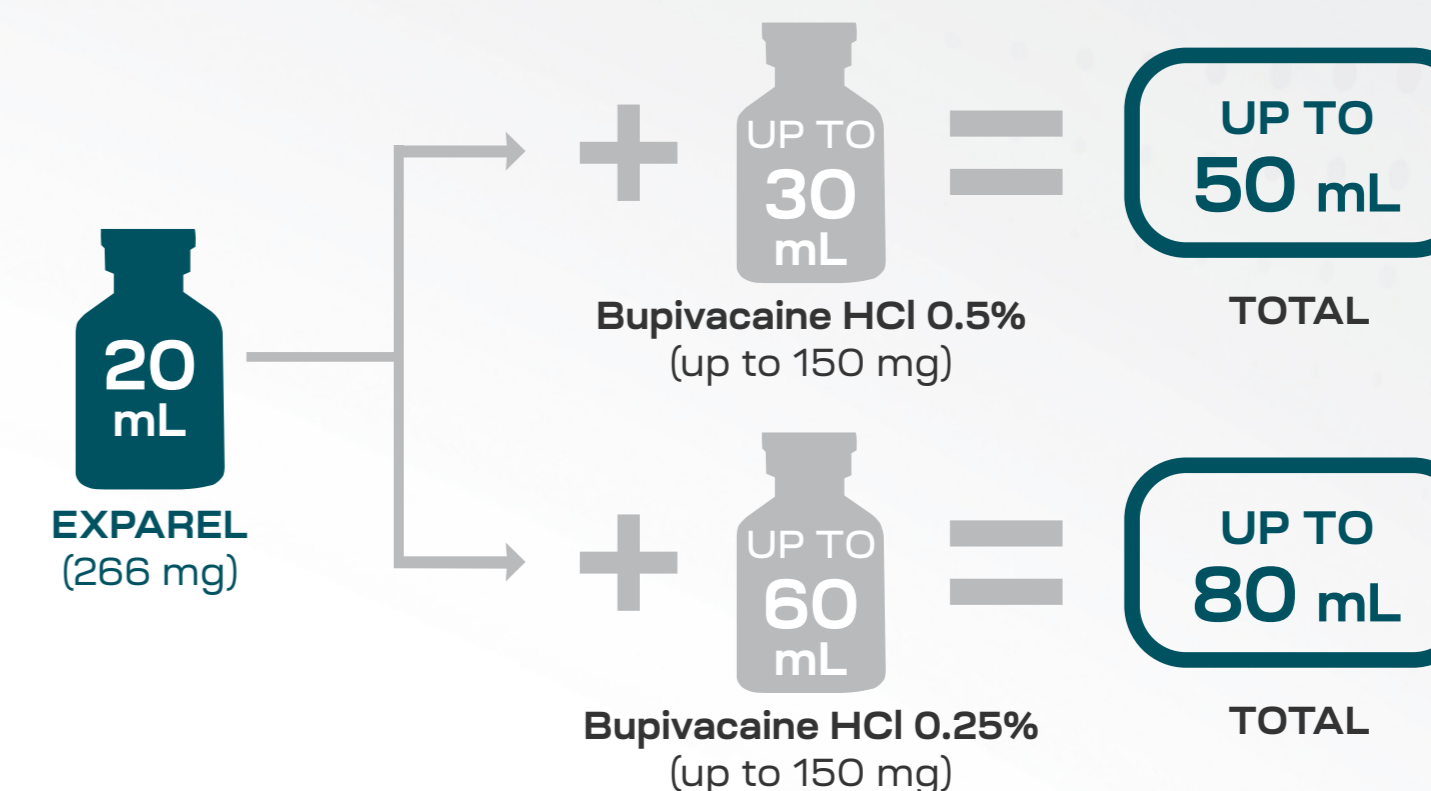
## Important considerations for admixing

- Admixing may impact the pharmacokinetic and/or pharmacodynamic properties of EXPAREL; the effect is concentration dependent
- Do not admix EXPAREL with any other agents or local anesthetics (eg, lidocaine) other than bupivacaine
- Avoid additional use of anesthetics within 96 hours following administration of EXPAREL

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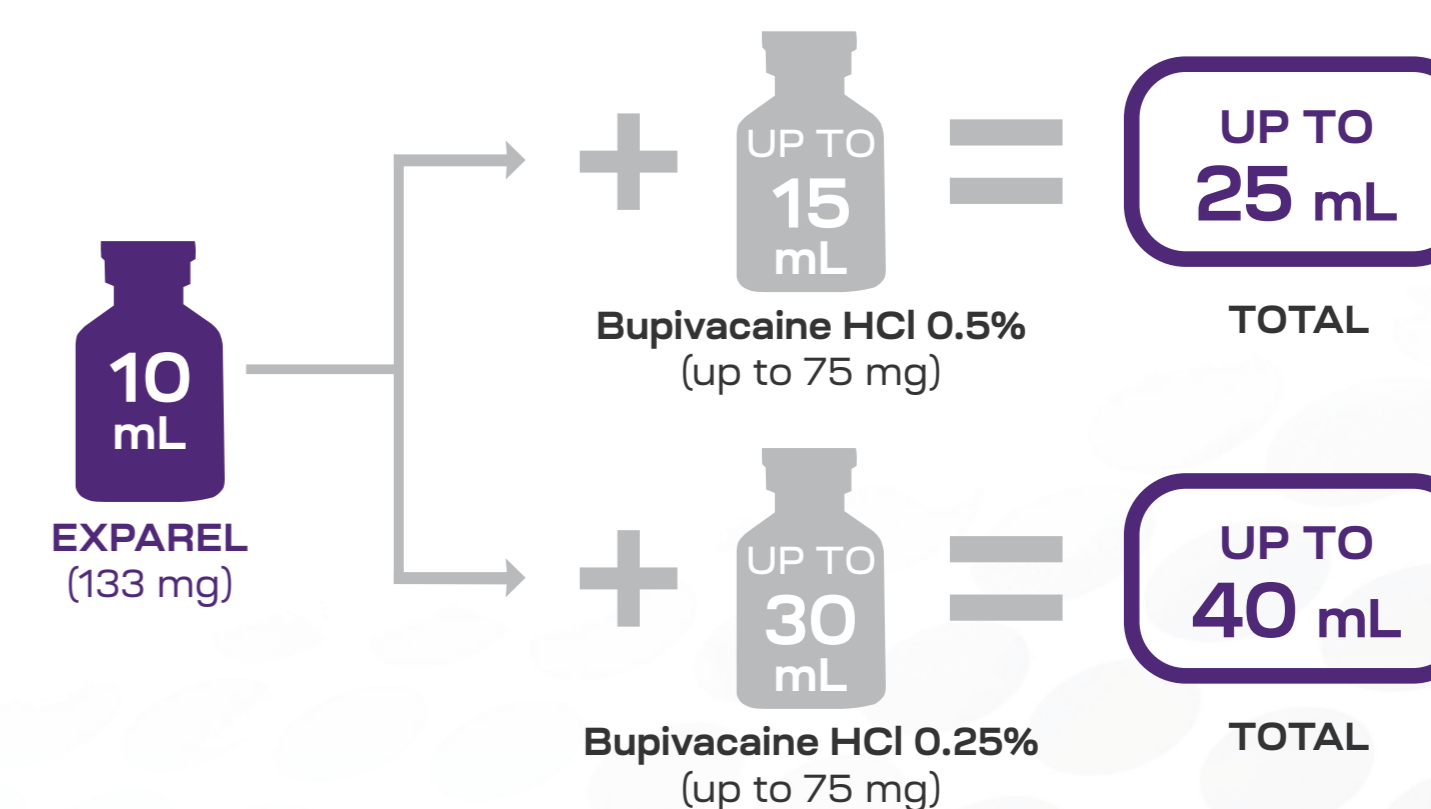
### Admixing bupivacaine HCl with 266 mg (20 mL) of EXPAREL

- One 20 mL vial contains 266 mg of EXPAREL, which is equivalent to 300 mg of bupivacaine HCl
- 1:2 ratio allows up to 150 mg of bupivacaine HCl to 266 mg of EXPAREL



### Admixing bupivacaine HCl with 133 mg (10 mL) of EXPAREL

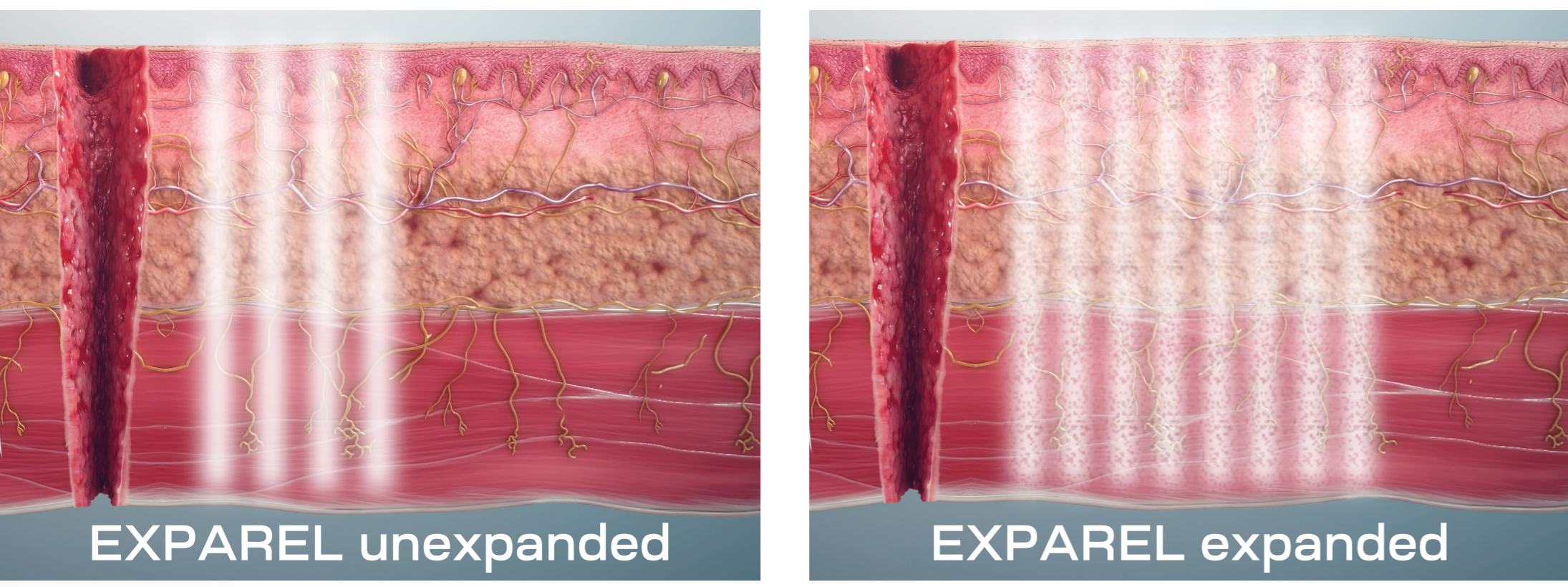
- One 10 mL vial contains 133 mg of EXPAREL, which is equivalent to 150 mg of bupivacaine HCl
- 1:2 ratio allows up to 75 mg of bupivacaine HCl to 133 mg of EXPAREL



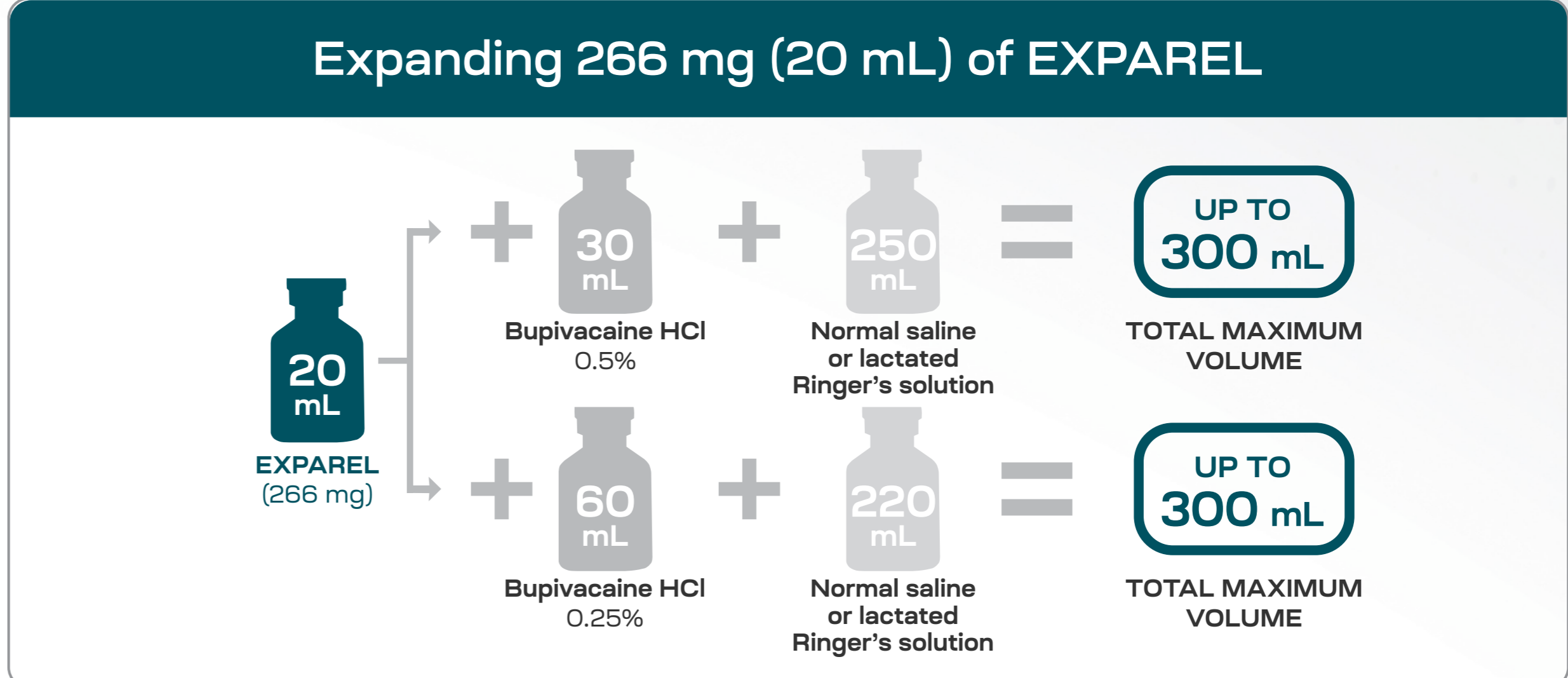
\*Bupivacaine HCl is indicated for use in patients aged 12 years and older.

# EXPAND EXPAREL TO ENSURE OPTIMAL ANALGESIC COVERAGE FOR LARGER SURGICAL SITES

- Sufficient multivesicular liposomes must be available at the pain receptors to continuously release bupivacaine, ensuring long-lasting analgesia
- Consider the size, vascularity, and neuroanatomy of the surgical site
- Expand the volume to disperse liposomes throughout the surgical site
  - Use normal saline (0.9%) or lactated Ringer’s solution
  - Maintain a minimum concentration of 0.89 mg/mL



Consider the amount of EXPAREL, bupivacaine HCl\*, and normal saline or lactated Ringer’s solution as part of the total maximum volume



### Compatibility factors

- EXPAREL should not be admixed with local anesthetics other than bupivacaine prior to administration
- Wait 20 minutes after administering lidocaine or other non-bupivacaine-based local anesthetics before administering EXPAREL into the same surgical site
- Allow topical antiseptics to dry before administering EXPAREL into the same surgical site
- Do not dilute EXPAREL with water or other hypotonic agents, as it will result in disruption of the liposomal particles

\*Bupivacaine HCl is indicated for use in patients aged 12 years and older.  
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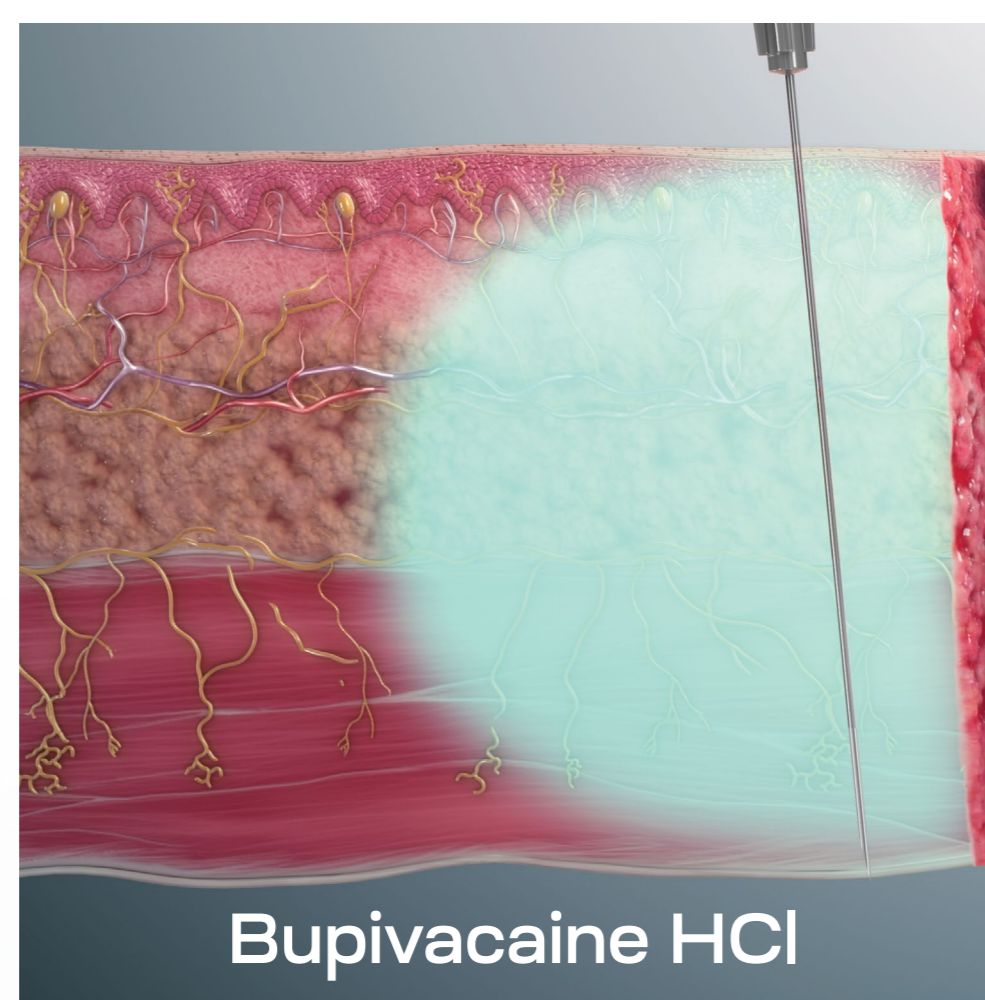


# PROPER TECHNIQUE IS CRITICAL FOR OPTIMAL OUTCOMES

EXPAREL is administered differently than bupivacaine HCl\*, allowing for precise delivery of analgesia

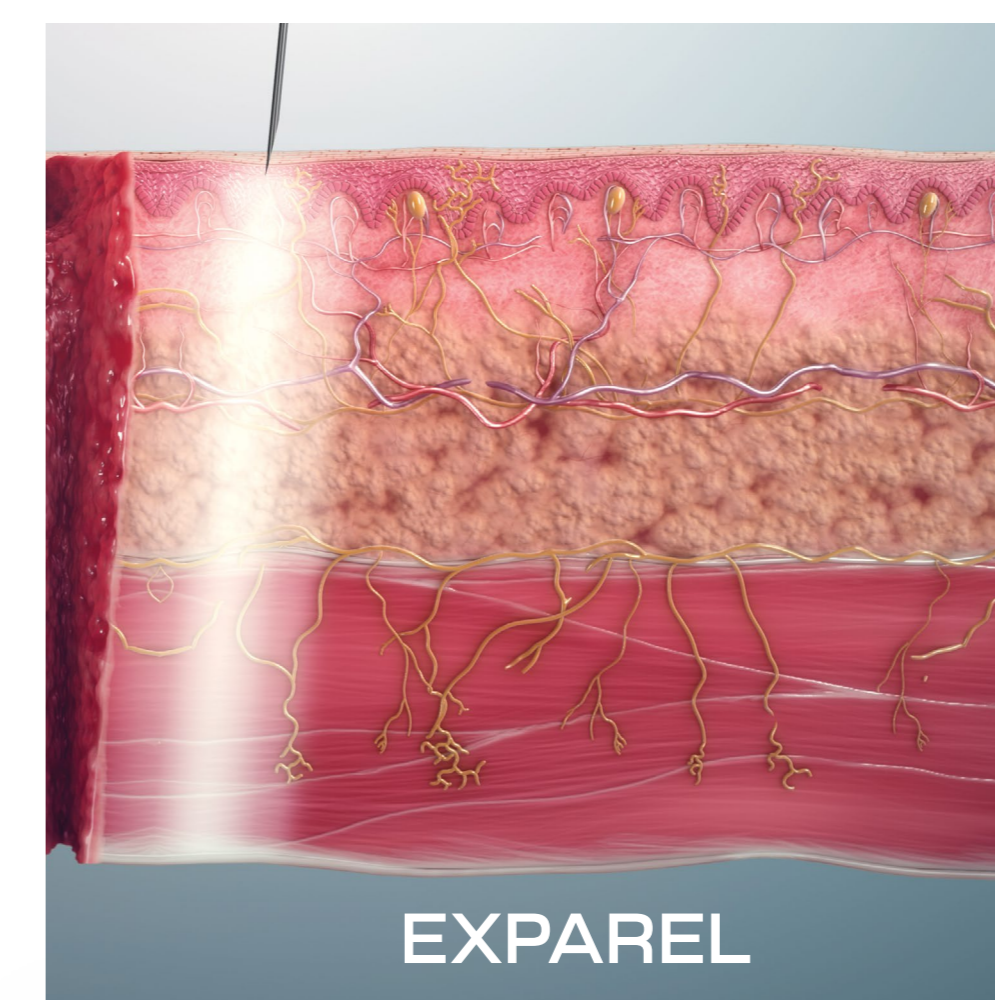
## BUPIVACAINE HCl

- An aqueous solution
  - Readily diffuses into surrounding tissue throughout the surgical site
  - Requires fewer injections for pain-receptor coverage



## EXPAREL

- Suspension composed of multivesicular liposomes carrying bupivacaine
  - Stays precisely where placed
  - Requires more injections to ensure pain-receptor coverage



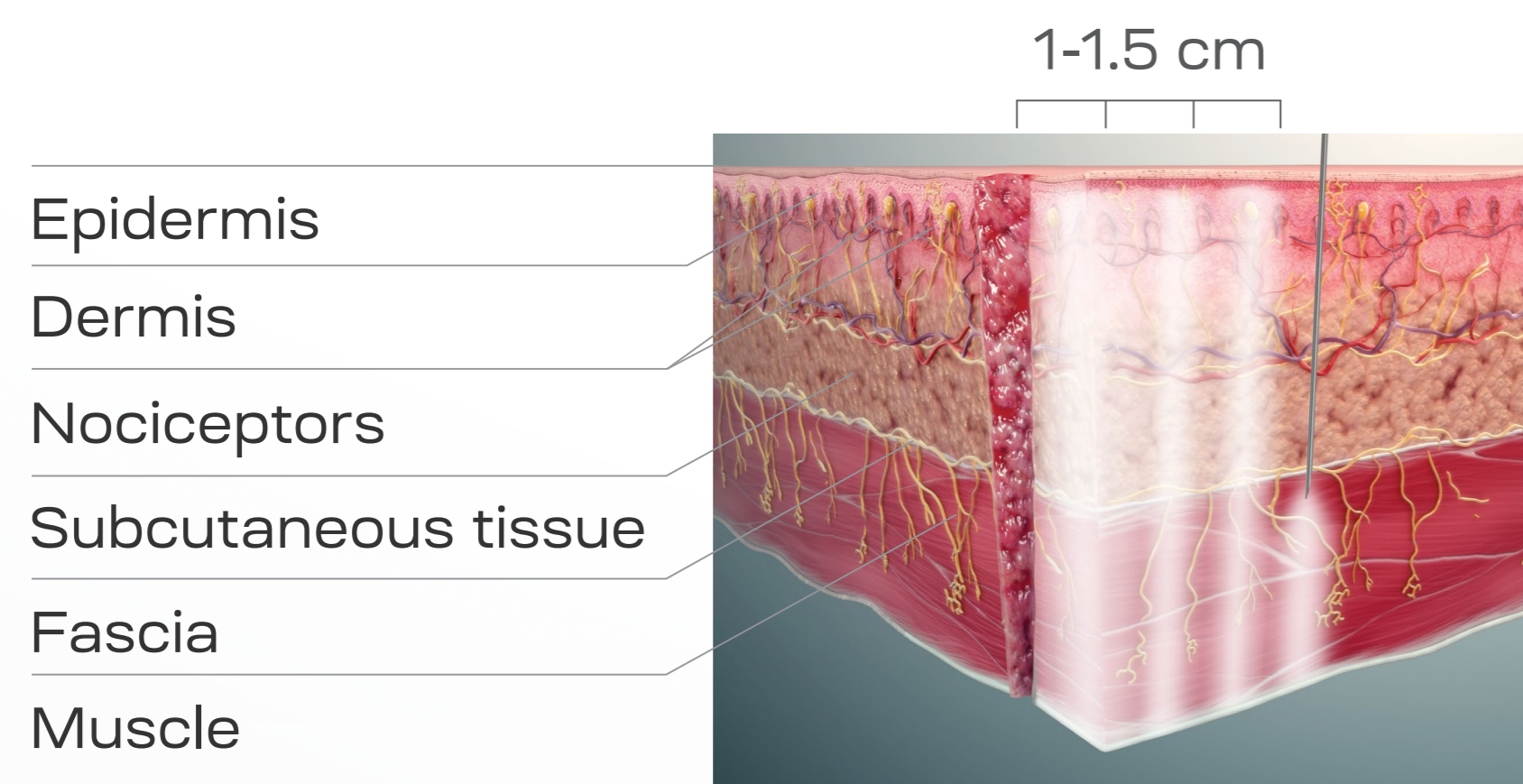
\*Bupivacaine HCl is indicated for use in patients aged 12 years and older.

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# ADMINISTRATION GUIDANCE FOR INFILTRATION

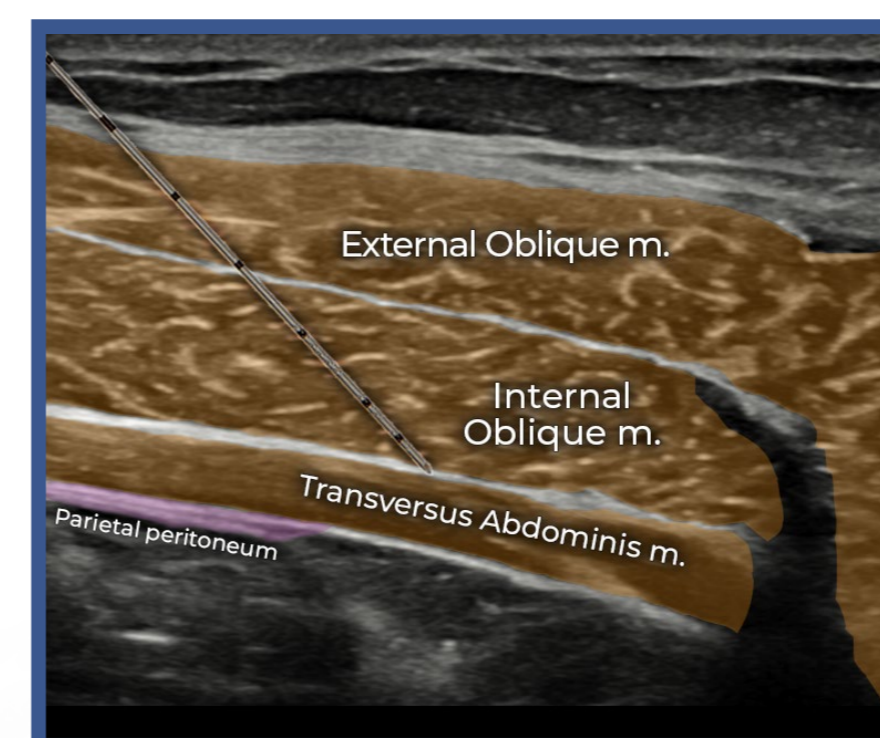
## Surgical site infiltration

- Use a 25-gauge or larger-bore needle to maintain the structural integrity of the liposomal particles
- Inject slowly and deeply (generally 1-2 mL per injection) into the soft tissues using a moving needle technique (ie, inject while withdrawing the needle)
- Infiltrate above and below the fascia and into the subcutaneous tissue
- Inject frequently in small areas (1-1.5 cm apart) to ensure overlapping analgesic coverage
- Aspirate frequently to minimize the risk of intravascular injection



## Fascial plane infiltration for regional field blocks

- Use a regional field block technique, such as ESP, PECS I and II, QL, RS, or TAP, for postsurgical regional analgesia
- Multiple blocks can be used in combination to achieve full coverage of the surgical site(s)
- Perform using ultrasound guidance or laparoscopic visualization to enable precise placement of EXPAREL within the plane
- Deposit EXPAREL within the musculofascial plane so that it can spread and provide sensory blockade to the nerve(s) contained within the anatomical plane



Sonoanatomy showing abdominal wall muscles and the needle direction for the lateral TAP block. The pool of EXPAREL mixture is seen in the correct plane.

ESP=erector spinae plane; PECS=pectoralis; QL=quadratus lumborum; RS=rectus sheath; TAP=transversus abdominis plane.

Please see Important Safety Information by tapping the ISI tab and full Prescribing Information at [www.EXPAREL.com](http://www.EXPAREL.com).

# ADMINISTRATION GUIDANCE FOR INTERSCALENE BRACHIAL PLEXUS NERVE BLOCK (ISBPNB) IN ADULTS

- The recommended dose of EXPAREL for ISBPNB in adults is 133 mg (10 mL) and is based on a study of patients undergoing either TSA or RCR
- Do not exceed maximum dose of 133 mg (10 mL)
- Administer EXPAREL with a 25-gauge or larger-bore needle to maintain the structural integrity of liposomal bupivacaine particles

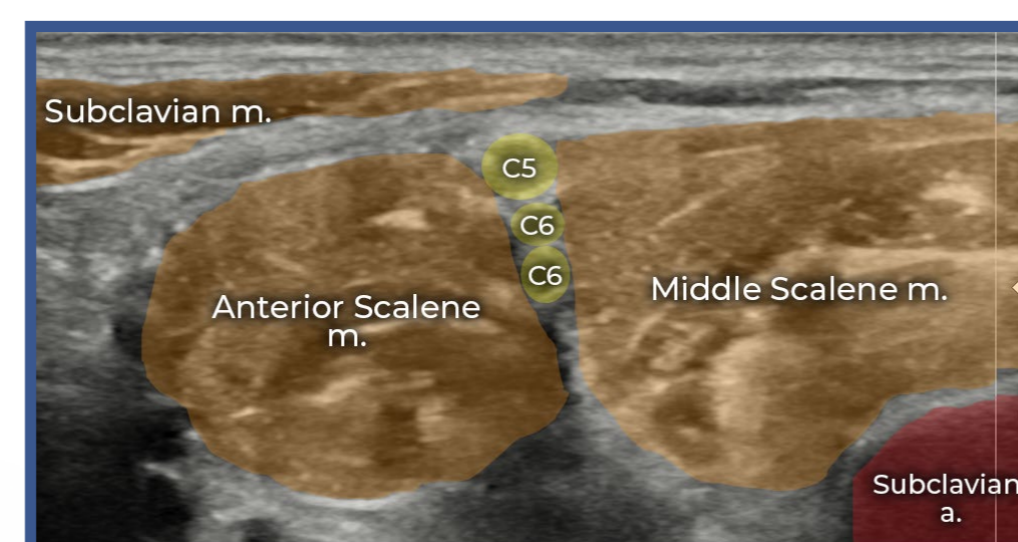
## STEP 1: Locate the interscalene brachial plexus

- Place patient in the supine position, with the head of the bed elevated 45 degrees



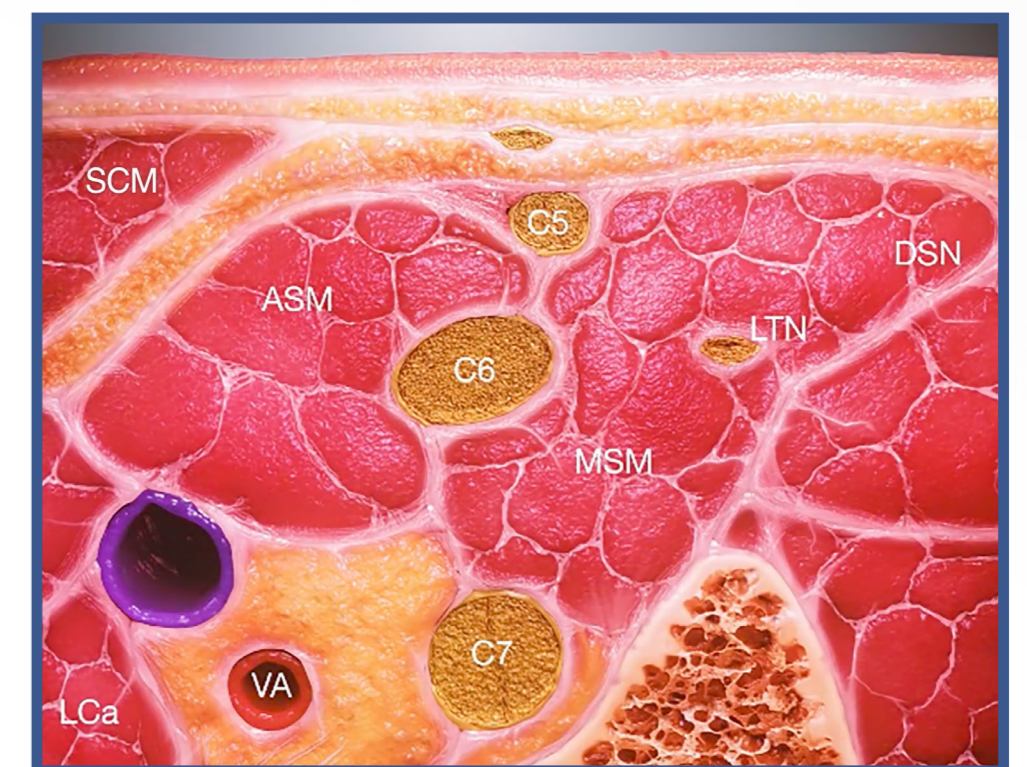
## STEP 2: Visualize the C5 to C7 nerve roots

- Place an ultrasound probe on the patient's neck superior to the clavicle to identify the interscalene brachial plexus between the anterior and middle scalene muscles



## STEP 3: Perform ISBPNB with EXPAREL

- Insert a 20- to 22-gauge echogenic needle into the plane from lateral to medial until the tip is just lateral to the bottom of the interscalene brachial plexus
- Confirm needle position using nerve stimulation and hydrodissection
- Deposit EXPAREL between the anterior and middle scalene muscles until the infiltration around the brachial plexus is documented by ultrasound



ASM=anterior scalene muscle; C5 to C7=cervical nerve roots; DSN=dorsal scapular nerve; LCa=longus capitis muscle; LTN=long thoracic nerve; MSM=middle scalene muscle; RCR=rotator cuff repair; SCM=sternocleidomastoid; TSA=total shoulder arthroplasty; VA=vertebral artery.

Please see Important Safety Information by tapping the ISI tab and full Prescribing Information at [www.EXPAREL.com](http://www.EXPAREL.com).

# ADMINISTRATION GUIDANCE FOR SCIATIC NERVE BLOCK IN THE POPLITEAL FOSSA IN ADULTS

- The recommended dose of EXPAREL for sciatic nerve block in the popliteal fossa in adults is 133 mg (10 mL) and is based on a study of patients undergoing bunionectomy
- Do not exceed maximum EXPAREL dose of 133 mg (10 mL)
- Administer EXPAREL with a 25-gauge or larger-bore needle to maintain the structural integrity of the liposomal bupivacaine particles

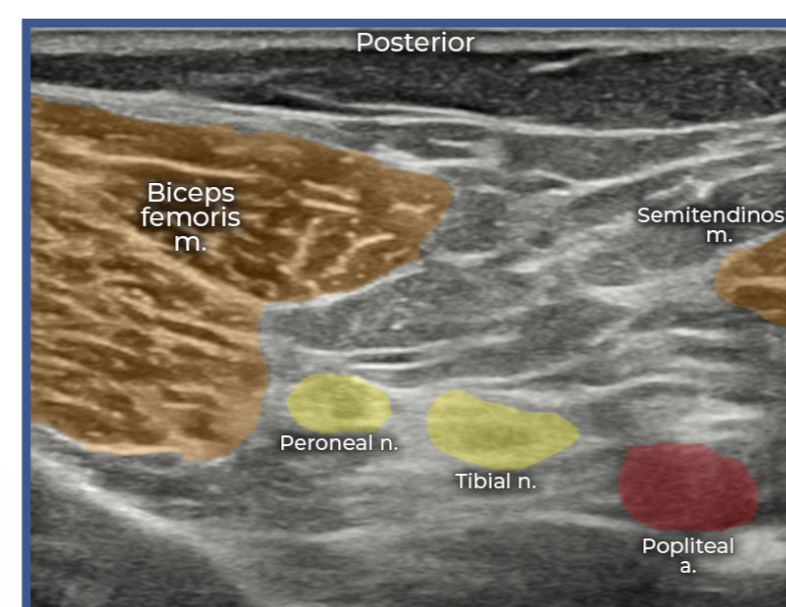
## STEP 1: Locate the popliteal fossa

- Place patient in the supine position, with the knee flexed and hip internally rotated to allow access to the posterior thigh and popliteal fossa



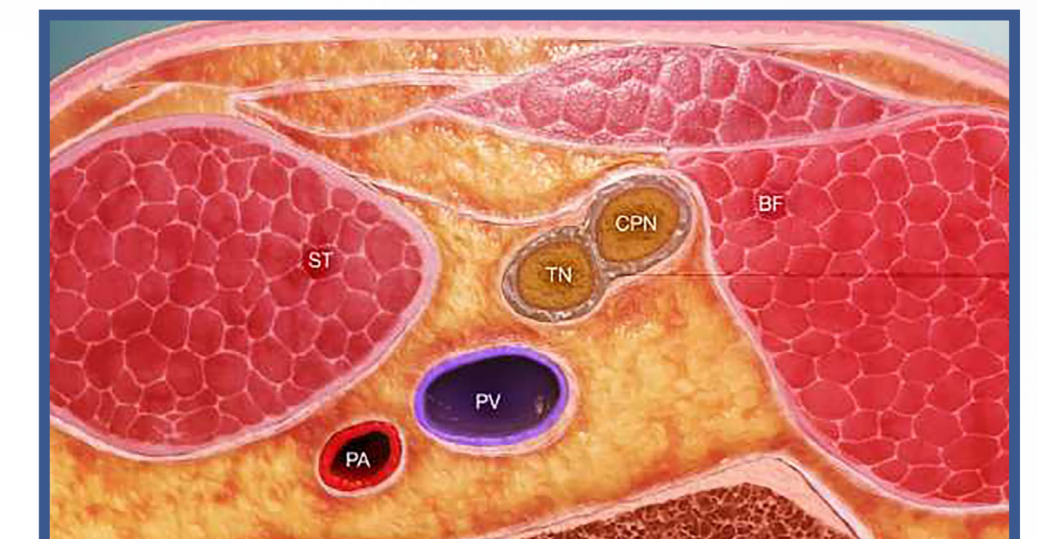
## STEP 2: Visualize the TN and CPN

- Use an ultrasound probe to identify the elements just above the popliteal fossa crease
- Move the probe proximally until the bifurcation of the TN and CPN is identified within the sciatic nerve sheath



## STEP 3: Perform sciatic nerve block in the popliteal fossa with EXPAREL

- Insert a 20- to 22-gauge needle into the plane in a lateral to medial orientation, bypassing the CPN laterally until adjacent to the TN
- Confirm needle position using nerve stimulation and hydrodissection
- Deposit EXPAREL slowly until adequate spread around the TN and CPN is achieved



CPN=common peroneal nerve; TN=tibial nerve.

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# ADMINISTRATION GUIDANCE FOR ADDUCTOR CANAL BLOCK IN ADULTS

- The recommended dose of EXPAREL for adductor canal block in adults is 133 mg (10 mL) admixed with 50 mg (10 mL) 0.5% bupivacaine HCl\*, for a total volume of 20 mL, and is based on a study of patients undergoing total knee arthroplasty
- Do not exceed maximum EXPAREL dose of 133 mg (10 mL)
- Administer EXPAREL with a 25-gauge or larger-bore needle to maintain the structural integrity of the liposomal bupivacaine particles

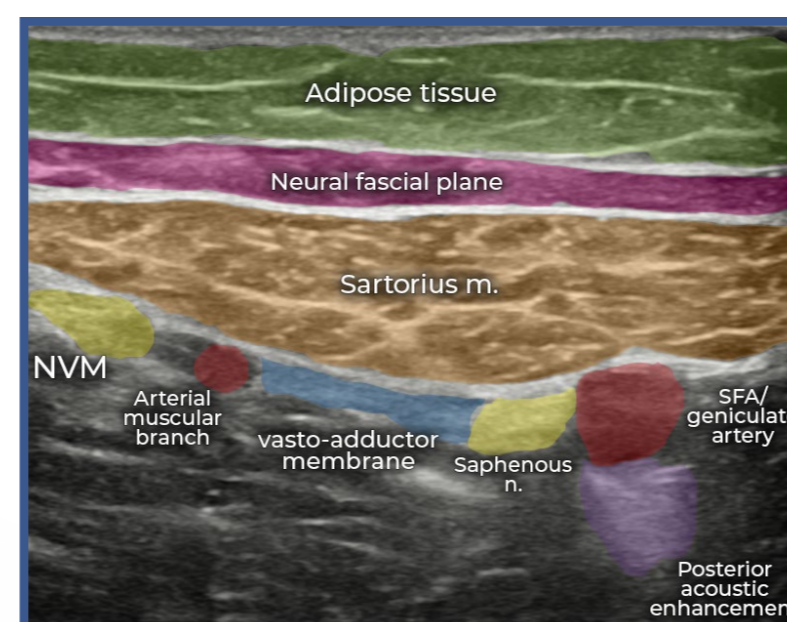
## STEP 1: Locate the adductor canal

- Place patient in the supine position, with the hip and knee slightly flexed and the hip externally rotated to allow access to the medial thigh



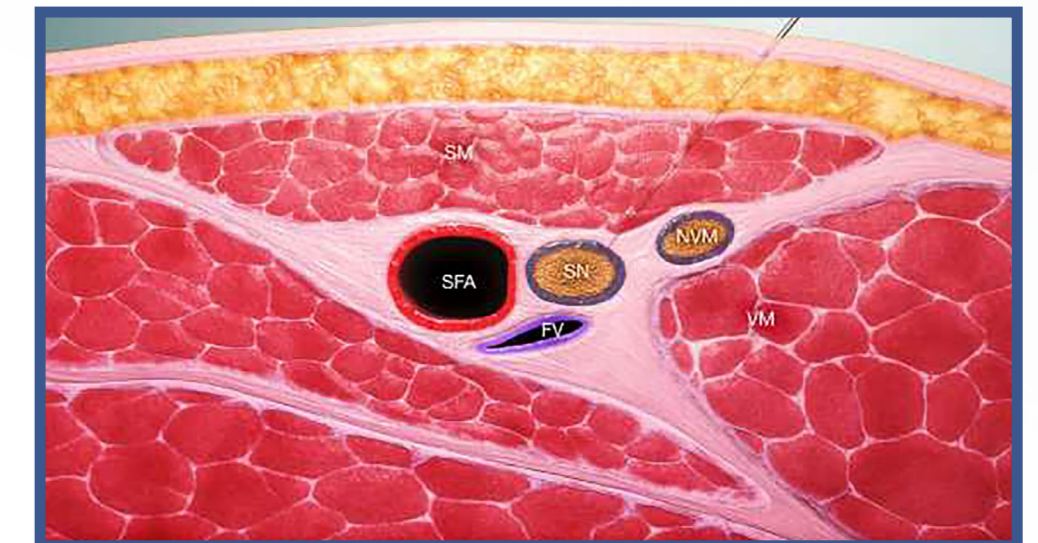
## STEP 2: Visualize the saphenous nerve and NVM

- Use a probe to identify the elements of the sartorius muscle and femoral artery and the vastus medialis allowing visualization of saphenous nerve and NVM



## STEP 3: Perform adductor canal block with EXPAREL

- Insert a 20- to 22-gauge needle into the plane in an anterior medial to posterior lateral orientation and advanced toward the NVM
- Confirm needle position using nerve stimulation and hydrodissection
- Slowly deposit 10 mL of the EXPAREL admixture around the NVM until adequate spread is achieved
- Reposition needle to the saphenous nerve, repeating the injection procedure for the remaining 10 mL of EXPAREL admixture



NVM=nerve to vastus medialis; SFA=superficial femoral artery.

\*Bupivacaine HCl is indicated for use in patients aged 12 years and older.

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# DELIVER LONG-LASTING POSTSURGICAL PAIN CONTROL WITH THE VERSATILITY OF EXPAREL

## INFILTRATION

Broad indication across surgical procedures allows for local analgesia via infiltration and regional analgesia via field block techniques such as TAP, ESP, PECS, and QL in patients 6 years and older<sup>5-10</sup>

## INTERSCALENE BRACHIAL PLEXUS NERVE BLOCK

Use in adults for regional analgesia in procedures such as TSA and RCR

## SCIATIC NERVE BLOCK IN THE POPLITEAL FOSSA

Use in adults for regional analgesia in foot and ankle procedures such as bunionectomy

## ADDUCTOR CANAL BLOCK

Use in adults for regional analgesia in knee procedures such as TKA



Learn more about the use of EXPAREL across a wide range of procedures  
[CLICK HERE](#)



### Proven efficacy

Durable pain control while reducing or eliminating the need for opioids<sup>11-15\*</sup>



### Demonstrated safety

Well-established safety profile demonstrated across a full range of surgical procedures<sup>1,16-18</sup>



### Trusted experience

More than 13 million patients have received non-opioid EXPAREL since 2012

ESP=erector spinae plane; PECS=pectoralis; QL=quadratus lumborum; RCR=rotator cuff repair; TAP=transversus abdominis plane; TKA=total knee arthroplasty; TSA=total shoulder arthroplasty.

\*The clinical benefit of the decrease in opioid consumption was not demonstrated in the pivotal trials.

Please see Important Safety Information by tapping the ISI tab and full Prescribing Information at [www.EXPAREL.com](http://www.EXPAREL.com).

## INDICATION

EXPAREL is indicated to produce postsurgical local analgesia via infiltration in patients aged 6 years and older and regional analgesia in adults via an interscalene brachial plexus nerve block, sciatic nerve block in the popliteal fossa, and an adductor canal block. Safety and efficacy have not been established in other nerve blocks.

## IMPORTANT SAFETY INFORMATION

EXPAREL 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 nerve block were nausea, pyrexia, headache, 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.

Do not admix lidocaine or other non-bupivacaine local anesthetics with EXPAREL. EXPAREL may be administered at least 20 minutes or more following local administration of 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 nerve blocks, 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.

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

For more information, please visit [www.EXPAREL.com](http://www.EXPAREL.com) or call 1-855-793-9727.

## 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, sciatic nerve block in the popliteal fossa, and adductor canal 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.

## References

1. Bramlett K, Onel E, Viscusi ER, Jones K. A randomized, double-blind, dose-ranging study comparing wound infiltration of DepoFoam bupivacaine, an extended-release liposomal bupivacaine, to bupivacaine HCl for postsurgical analgesia in total knee arthroplasty. *Knee*. 2012;19(5):530-536. 2. Angst MS, Drover DR. Pharmacology of drugs formulated with DepoFoam: a sustained release drug delivery system for parenteral administration using multivesicular liposome technology. *Clin Pharmacokinet*. 2006;45(12):1153-1176. 3. Kohn FR, Malkmus SA, Brownson EA, Rossi SS, Yaksh TL. Fate of the predominant phospholipid component of DepoFoam drug delivery matrix after intrathecal administration of sustained-release encapsulated cytarabine in rats. *Drug Deliv*. 1998;5(2):143-151. 4. Richard BM, Newton P, Ott LR, et al. The safety of EXPAREL® (bupivacaine liposome injectable suspension) administered by peripheral nerve block in rabbits and dogs. *J Drug Deliv*. 2012;2012:962101. doi:10.1155/2012/962101. 5. Niraj G, Kelkar A, Powell R. Ultrasound-guided subcostal transversus abdominis plane block. *Int J Ultrasound Applied Tech Periop Care*. 2010;1(1):9-12. 6. Forero M, Adhikary SD, Lopez H, Tsui C, Chin KJ. The erector spinae plane block. A novel analgesic technique in thoracic neuropathic pain. *Reg Anesth Pain Med*. 2016;41(5):621-627. 7. Tsui BCH, Fonseca A, Munshey F, McFadyen G, Caruso TJ. The erector spinae plane (ESP) block: a pooled review of 242 cases. *J Clin Anesth*. 2019;53:29-34. 8. Blanco R, Parras T, McDonnell JG, Prats-Gilano A. Serratus plane block: a novel ultrasound-guided thoracic wall nerve block. *Anaesthesia*. 2013;68:1107-1113. 9. Børglum J, Jensen K. Abdominal surgery: advances in the use of ultrasound-guided truncal blocks for perioperative pain management. In: Derbel F, ed. *Abdominal Surgery*. Rijeka, Croatia: InTech; 2012:69-94. 10. Go R, Huang YY, Weyker PD, Webb CA. Truncal blocks for perioperative pain management: a review of the literature and evolving techniques. *Pain Manag*. 2016;6(5):455-468. 11. Patel MA, Gadsden JC, Nedeljkovic SS, et al. Brachial plexus block with liposomal bupivacaine for shoulder surgery improves analgesia and reduces opioid consumption: results from a multicenter, randomized, double-blind, controlled trial. *Pain Med*. 2020;21(2):387-400. 12. Mont MA, Beaver WB, Dysart SH, Barrington JW, Del Gaizo DJ. Local infiltration analgesia with liposomal bupivacaine improves pain scores and reduces opioid use after total knee arthroplasty: results of a randomized controlled trial. *J Arthroplasty*. 2018;33(1):90-96. 13. Data on file. 2363. Parsippany, NJ: Pacira BioSciences, Inc.; June 2017. 14. Nedeljkovic SS, Kett A, Vallejo MC, et al. Transversus abdominis plane block with liposomal bupivacaine for pain after cesarean delivery in a multicenter, randomized, double-blind, controlled trial. *Anesth Analg*. 2020;131(6):1830-1839. 15. Gorfine SR, Onel E, Patou G, Krivokapic ZV. Bupivacaine extended-release liposome injection for prolonged postsurgical analgesia in patients undergoing hemorrhoidectomy: a multicenter, randomized, double-blind, placebo-controlled trial. *Dis Colon Rectum*. 2011;54(12):1552-1559. 16. Grissinger M. Improved safety needed in handling elastomeric reservoir balls used for pain relief. *PT*. 2013;38(5):243-245. 17. Hu D, Onel E, Singla N, Kramer WG, Hadzic A. Pharmacokinetic profile of liposome bupivacaine injection following a single administration at the surgical site. *Clin Drug Investig*. 2013;33(2):109-115. 18. Gadsden J, Long WJ. Time to analgesia onset and pharmacokinetics after separate and combined administration of liposome bupivacaine and bupivacaine HCl: considerations for clinicians. *Open Orthop J*. 2016;10:94-104.

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