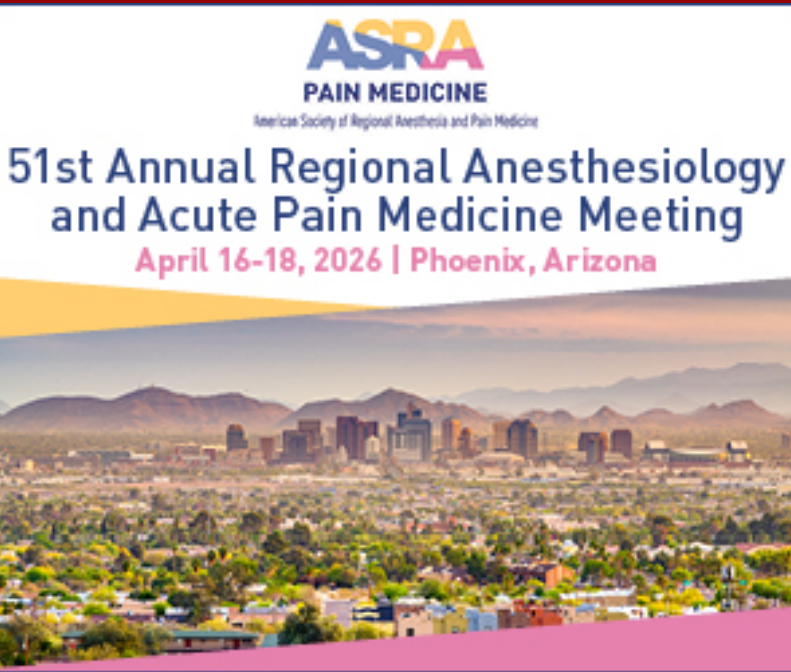




Erector Spinae Plane Blocks for Immunotherapy-Associated Thoracic Cancer Pain: A Case Report

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INTRODUCTION

- Approximately 44% of cancer patients experience pain at some point during their disease trajectory, with higher rates in advanced stages
- Cancer pain can arise from the tumor itself, treatment-related interventions, or secondary conditions unrelated to the neoplasm
- Immune checkpoint inhibitors (ICIs) improve survival in non-small cell lung cancer, but they may trigger immune-related adverse events including severe, persistent pain.
- Durvalumab, a PD-L1 inhibitor used as consolidation therapy after chemoradiation, has recognized immune-mediated toxicities involving the musculoskeletal and nervous systems.

METHODS

- According to the University of Chicago IRB policy, the publication of a single de-identified medically challenging case is not considered human subjects research and is exempt from IRB review.
- We retrospectively reviewed the patient’s medical records and removed all patient identifiers.
- Patient’s informed consent was obtained for submission of a case report.
- All interventions aligned with the standard of care.
- No off-label drug use or investigational treatments were involved.

CASE DESCRIPTION

- An 80-year-old woman with right lung adenocarcinoma s/p lobectomy underwent concurrent chemoradiation with carboplatin and paclitaxel, followed by consolidation immunotherapy with durvalumab for local recurrence. **After a single durvalumab infusion, she experienced abrupt onset of severe bilateral thoracic back and chest wall pain.** Immunotherapy was subsequently discontinued.
- Presented to pain clinic for constant thoracic pain with intermittent sharp, stabbing flares. Pain radiated circumferentially from the paraspinal region around the ribs to the anterior chest wall. Baseline pain intensity was 8–10/10 and associated with cutaneous numbness and paresthesia.
- Pain was refractory to multimodal pharmacologic therapy, including gabapentin, acetaminophen, muscle relaxants, NSAIDs, and opioids. Bilateral paravertebral blocks only provided transient relief, and bilateral intercostal nerve blocks resulted in minimal benefit.
- Ultrasound-guided bilateral ESP blocks with 0.25% bupivacaine and 80 mg triamcinolone administered at the T6 transverse process. **This achieved 80% pain reduction with sustained functional improvement.**
- Repeat ESP blocks at 6 month intervals reduced pain scores to 2/10** without complications and provided functional improvement.

DISCUSSION

- This case highlights the adverse effect of Durvalumab and other PD-1/PD-L1 agents including peripheral neuropathy/neuritis, which may manifest as severe thoracic neuropathic pain.
- ESP blocks have evidence for treating thoracic and cancer pain, including reports of refractory chest wall malignancy pain.
- ESP blocks also provide somatic and visceral analgesia, suggesting opioid-sparing benefits.
- ESP blocks show potential in conditions where conventional therapies (i.e. epidurals) have failed or are otherwise difficult/contraindicated.
- This case supports the use of regular ESP blocks for selected immunotherapy-associated chronic chest wall pain within oncology–pain care.

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Date	Procedure	Result/Improvement
12/4/2024	Bilateral Paravertebral Block	25% relief on and off for 2-3 weeks
12/23/2024	Bilateral intercostal nerve block	Minimal relief for a few days. NRS pain score at follow-up is 10/10.
2/3/2025	Bilateral ESP blocks, T6 transverse process	80% relief ongoing; some continued burning pain radiating from the back mostly improved since the ESP block
5/13/2025	Bilateral ESP blocks, T6 transverse process	Ongoing relief; Reduced Pain scores from 10/10 to 2/10
12/1/2025	Bilateral ESP blocks, T6 transverse process	Ongoing relief