

7<sup>th</sup> International Conference and Exhibition on

# Pain Research and Management

October 11-12, 2018 | Zurich, Switzerland

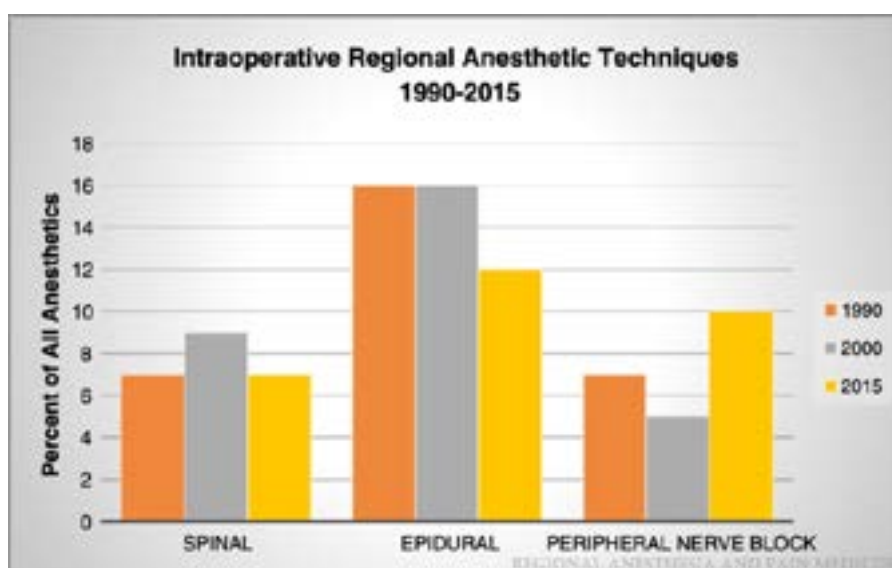


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## Paraneuraxial nerve blocks: Can they replace neuraxial nerve blocks?

Over the past 10-15 years, the quick development of ultrasound technique has rapidly changed the practice of regional anesthesia including the greater use of truncal nerve blocks. Some of the truncal blocks are performed just outside of neuraxial region, such as deep cervical plexus block (dCPB), paravertebral nerve block (PVB) and lumbar plexus block (LPB), in addition to Thoracolumbar Interfascial Plane (TLIP),<sup>1</sup> retrolaminar block (RLB), erector spinae plane (ESP) block, and cervical columnar interfascial plane (CCIP) block, quadratus lumborum block III (QL, III), which are new techniques. These techniques are comparable to neuraxial nerve blocks in terms of analgesic efficacy and may confer many of advantages over neuraxial nerve blocks.<sup>2</sup> Specifically, neuraxial blocks are not site-specific, they cause hypotension, and some of them may lead urinary retention, the placement of Foley catheters, limited mobility.<sup>2-3</sup> We have proposed the use of the new terminology “Paraneuraxial Nerve Block (ParaNXB)”<sup>4</sup> This new term provides a direct pictorial anatomy of the nerve block and would help clinicians develop clinical insights.<sup>5-7</sup> The ParaNXB family may include the dCPB, PVB and the LPB, as well as ESP, RLB, TLIP block, CCIP block, QL III block and sympathetic chain block. We believe that ParaNXB will become even more popular clinically, due to its clinical and anatomical characteristics. It is thus clinically significant and beneficial in the practice, teaching, and training aspects of regional anesthesia. Study has shown that since 1990, wherein the relative percentage of spinal and epidural techniques has declined, and peripheral nerve blocks have increased.<sup>8</sup> ParaNXBs will challenge the clinical role of the traditional neuraxial nerve blocks fundamentally.



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## Recent Publications

1. Hironobu Ueshima, Hiroshi Otake. Clinical Experiences of the Continuous Thoracolumbar Interfascial Plane (TLIP) Block. *Journal of Clinical Anesthesia* 2016; 34, 555–556
2. Davies RG, Myles PS, Graham JM. A comparison of the analgesic efficacy and side-effects of paravertebral vs epidural blockade for thoracotomy—a systematic review and meta-analysis of randomized trials. *Br J Anaesth* 2006;96:418–26.
3. Powell ES, Cook D, Pearce AC, et al. A prospective, multicentre, observational cohort study of analgesia and outcome after pneumonectomy. *Br J Anaesth* 2011;106:364–70.
4. Jeff L. Xu. Paraneuraxial Nerve Blocks: A well-defined novel terminology that is clinically essential for regional anesthesia. *J Clin Anesth.* 2017 Sep 13;43:14
5. Alan David Kaye, Richard D. Urman, Nalini. *Essentials of Regional Anesthesia*. New York, NY: Springer Science+Business Media, LLC, 2012. Page 585
6. L. Brown. *Atlas of Regional Anesthesia*. 4th ed. Philadelphia, PA: Saunders, 2010. Page 254
7. Andrea Toufexis Esch, Andrew Esch, John L. Knorr, Andre P. Boezaart. Long-Term Ambulatory Continuous Nerve Blocks for Terminally Ill Patients: A Case Series. *Pain Medicine* 2010; 11:1299–1302
8. Joseph M. Neal, Anne Gravel Sullivan, Richard W. Rosenquist, Dan J. Kopacz. Regional Anesthesia and Pain Medicine US Anesthesiology Resident Training—The Year 2015. *Regional Anesthesia and Pain Medicine*, 2017; 42:437-441

## Biography

Jeff L. Xu, MD, chief of Regional Anesthesia & Acute Pain Management, Program Director of Regional Anesthesiology & Acute Pain Medicine Fellowship. As the founder of the Regional Anesthesia & Acute Pain Services at Westchester Medical Center, he initiated and developed the regional anesthesia program for the anesthesia residents. He also is the founder of the fellowship program for Regional Anesthesiology & Acute Pain Medicine at Westchester Medical Center/New York Medical College, New York, USA, and served as fellowship program director. He served as principal investigator on multiple clinical studies, reviewer for peer review journals, faculty for regional anesthesia workshops, speaker for national and international conferences.

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