

- Regional Anesthesia Fellowship –

The Regional Fellowship Program consists of 12 months specialty training for qualified physicians who have completed an accredited Anesthesiology residency. Preference is given to mature individuals with interest in regional anesthesia, a sub-specialty focused on the perioperative management of patients receiving neuraxial or peripheral neural blockade for anesthesia or analgesia. Fellowship training should be concerned with the development of expertise in the practice and theory of regional anesthesiology and acute pain management techniques, and the understanding of the related physiology and pharmacology. Faculty of the regional anesthesia/Acute Pain Medicine division will select the successful applicants on the basis of written applications, academic records and interviews.

I Description

The Director of the fellowship training program is a dedicated and skilled practitioner of regional anesthesia. The 4 faculty are all experienced in regional anesthesiology and/or related disciplines such as acute pain medicine. All the necessary equipment for the performance of all regional anesthetic techniques is available, including simulators, neuraxial and peripheral block supplies, catheter systems, and the basic requirements for conducting general anesthesia, according to the ASA standards. The hospital also provides the appropriate support services, including are not limited to anesthesia technical and pharmacy support. A departmental library and an institutional library, dedicated to anesthesiology with literature specific to the practice of regional anesthesia are also maintained.

The clinical program will serve as the cornerstone of the fellowship training in regional anesthesia. In order to achieve the necessary level of expertise, fellows will be familiarized with the indications, contraindications, techniques, and complications of the techniques listed below:

Classification of regional anesthesia procedures

Basic	Intermediate	Advanced
Superficial cervical plexus block	Deep cervical plexus block	Continuous interscalene brachial plexus block
Axillary brachial plexus block	Interscalene block	Continuous infraclavicular and axillary brachial plexus block
Intravenous regional block (Bier block)	Supraclavicular interscalene block	Thoracic paravertebral block: single shot, continuous
Wrist block	Infraclavicular brachial plexus block	Thoraco-lumbar paravertebral block
Digital nerve block	Sciatic nerve block: posterior approach	Combined lumbar plexus/sciatic blocks
Intercostobrachial block	Genitofemoral block	Lumbar plexus block
Saphenous block	Popliteal block: all approaches	Continuous femoral nerve block
Ankle block	Suprascapular nerve block	Sciatic nerve block: anterior approach and parafemoral technique
Spinal anesthesia	Intercostal nerve block	Obturator block
Epidural anesthesia		Continuous sciatic block
Combined spinal/epidural anesthesia		Continuous popliteal nerve block: all approaches
Femoral nerve block		Cervical paravertebral blocks
		Maxillary nerve blocks
		Mandibular nerve blocks
		Retrobulbar and peribulbar nerve blocks

Fellows will complete daily case logs to track their clinical experiences. These logs will be reviewed regularly with the appropriate faculty advisor.

A didactic and educational program specifically dedicated to regional anesthesia practice will also be a part of fellowship training.

- i) A lecture series which covers topics relevant to, but not limited to regional anesthesia will be held no fewer than 12 times per year.

- ii) A "Journal Club" (current literature review) will be held at least once per month. Fellows will present articles at least twice in six months under the supervision of an attending anesthesiologist.
- iii) A case conference specifically designed for fellows and supervised, or given, by a qualified faculty member will take place at least once per month.
- ii) Fellows will be expected to deliver a lecture including a relevant literature review at least once during the course of the fellowship.
- iv) Fellows will be given the opportunity to appreciate the practice of regional anesthesia from a multidisciplinary approach via different methods including joint conferences with surgical or medical colleagues.

Research Objectives

Fellows will be required to participate in clinical and/or laboratory research and be given appropriate non-clinical time to fulfill this obligation. There will be opportunities for the fellow to become involved in research already in progress, or to develop an original project. In either case, an appropriate attending anesthesiologist will be appointed to mentor and assist the fellow to facilitate these goals. The types of activities that will be considered to suffice as academic projects include a research paper or case report, submitted to a peer-review journal and presented; a clinical chart review or a review article submitted to, and accepted by a peer-reviewed journal; a book chapter; or other endeavor. There will be discussion prior to commencement of the fellowship as to which of the above alternatives the fellow would like to pursue. If an original project is planned, the research protocol must be submitted with sufficient notice in order to complete the project in the time frame of the fellowship

II Primary Areas of Knowledge and Goals

The Regional Fellow will develop competence as a Regional Anesthesia physician-specialist, according to the criteria of the American Society of Regional Anesthesia and Pain Medicine. S/he will develop capabilities to evaluate the appropriate indications and perform a variety of regional anesthesia techniques for anesthesia and acute pain. The Regional Fellow is also encouraged to understand indications for rehabilitative approaches encompassing physical therapy, occupational therapy, pain psychology, under the guidance of faculty who have backgrounds in neurology and psychiatry. Equally important is

knowing the specific indications of interventional procedures such as neural blockades vs. non interventional techniques according to the patient, specific concomitant treatment and the surgery. Guidance and training in these techniques will be provided by faculty with appropriate expertise in regional anesthesia and anesthesiology certification or equivalent. The use of medications, especially NSAIDS, anticonvulsants, antidepressants, local anesthetics, neurolytic agents and opioid analgesics is crucial to the fellowship training as a complement of regional anesthesia techniques.

III Cognitive Objectives

At the end of their fellowship, fellows must be able to show **clinical competency** in the following areas:

- demonstrate rational selection of regional anesthesia for specific clinical situations
- demonstrate effective analgesia of patients by both pharmacological and interpersonal techniques
- demonstrate cost-effective management decisions
- demonstrate ability to rescue failed regional anesthesia techniques
- demonstrate effective management of isolated peripheral nerve and central neuraxial blocks with respect to the physiologic consequences both intraoperatively and postoperatively
- demonstrate successful use of a nerve stimulator for neuronal blocks
- demonstrate effective management of regional anesthesia in critically ill patients
- demonstrate teaching ability of junior residents during the academic year.

Exposure to regional anesthetic techniques involving pediatric and ambulatory surgery patients will be strongly encouraged, as well as the use of anatomic laboratory, as well as the use of advanced technique such as ultrasound. Physiologic and pharmacologic consequences of regional anesthesia will be stressed. Particular attention will be focused on the potential respiratory and hemodynamic perturbations which accompany performance of neuraxial and peripheral nerve blocks.

By completion of the accredited program, the fellow will also be expected to have a **working knowledge base** in the following area:

- understands general attributes of local anesthetic pharmacology
- understands specific clinical attributes of various local anesthetics, including onset, duration, motor/sensory differentiation, toxicity and treatment
- understands principles and indications for various local anesthetic adjuvants, including: epinephrine, phenylephrine, opioids, sodium bicarbonate, and clonidine
- understands principles of, and options for regional anesthetic procedures
- understands indications and contraindications for major anesthetic techniques
- understands complications of regional anesthetic techniques
- understands principles of regional anesthesia as they apply to pain management
- understands outcome studies related to the influence of regional anesthesia on perioperative outcome
- develops familiarity with major scientific studies related to regional anesthesia

V. Conferences and Reading Assignments

Education time is protected from clinical responsibilities. Attendance to grand Rounds and conferences is mandatory, barring excused absence. Regional Fellows will discuss textbook and journal readings with the faculty. Abstract concepts to clinical situations linked through problem-based learning will also be a part of discussions. Different teaching styles such as role-playing, Socratic and heuristic techniques will be attempted to promote interactions between Fellows with medical students and residents.

Information will be conveyed in varying ways to promote active learning. Besides discussions, didactic lectures, videos, correlation of radiographic imaging to skeletal models, morbidity and mortality conferences, and journal club formats will be incorporated into the year-round curriculum calendar. Special speakers from different disciplines, e.g. Neurosurgery, Radiology, Pharmacology, Complementary Medicine, enhance the multidisciplinary nature of pain management.

Suggested textbooks include:

1. David Brown: Atlas of Regional Anesthesia
2. Jacques E Chelly: Color Atlas of Peripheral Nerve Block
3. Jacques E Chelly, Andrea Casati & Guido Fanelli: Continuous Peripheral nerve block Techniques

Websites

www.nysora.com

www.regionalblock.com

VI. Evaluation:

- A) As per ACGME Residency Guidelines, the attending faculty will be evaluated by the fellows twice annually
- B) Written evaluations of fellows by all faculty with whom they have worked shall occur quarterly and be reviewed. The results of these evaluations shall be recorded and reviewed with the fellows by the program director no less often than every three months.