

Educational Objectives

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Following completion of the Congress, participants will be better able to:

- Apply new scientific data and clinical guidelines to improve patient selection and treatment outcomes for neuromodulation.
- Identify potential benefits, limitations and complications of neuromodulation therapies.
- Interpret study results based on trial design and apply lessons learned for application in the design of future trials.
- Analyze and understand psychological/psychiatric factors affecting outcomes in the treatment of chronic pain, movement disorders, cognitive and other disorders.
- Describe the bioengineering challenges and solutions at the neural interface, fundamentals and mechanisms of action of neuromodulation.
- Discuss and analyze the anatomy and physiology of the central CNS, peripheral and autonomic nervous systems to assist in patient selection, target selection and likelihood of therapeutic success.
- Discuss the uses of devices for functional electrical stimulation including rehabilitation of motor loss, loss of sensory function, and loss of cognitive function.

- Describe emerging neuromodulation therapies, new paradigms of therapy target selection and associated research in the medical field of neuromodulation.
- Distinguish mechanisms of disease states, cardiovascular disease and visceral pain syndromes and explain the current position of neuromodulation in these conditions.
- Explain the many variations now available in neuromodulation and how to select the appropriate technology.
- Explain the scientific merit and best practices for the use of intrathecal drug infusions including patient selection, drug selection and complication management.
- Critically appraise research methodology in neuromodulation and recognize how evolving treatment guidelines and registries are important.
- Apply the increasing knowledge base for neuromodulation in a wide variety of chronic illness management.
- Explain how cancer pain management has evolved into managing the pain of cancer survivors and recognize the growing need for neuromodulation solutions.