



# HARVARD MEDICAL SCHOOL

## DEPARTMENT OF CONTINUING EDUCATION

# PEDIATRIC NEURO-ONCOLOGY IN THE PROTON ERA

April 16–17, 2009

ROYAL SONESTA HOTEL BOSTON, CAMBRIDGE, MA

*Co-Directors*

WILLIAM E. BUTLER, MD; DAVID H. EBB, MD; NANCY J. TARBELL, MD; TORUNN I. YOCK, MD, MCH

*sponsored by the*

**Department of Neurosurgery, Massachusetts General Hospital  
Center for Pediatric Hematology and Oncology, MassGeneral Hospital for Children  
Department of Radiation Oncology, Massachusetts General Hospital**

### Course objectives:

As survival rates for childhood cancer improve, attention shifts to a search for effective therapies with greater potential for improved long term health status and quality of life. The physical properties of high energy protons permit significant reductions in incidental radiation to large volumes of uninvolved tissue. Pediatric tissue is particularly vulnerable to the harmful effects of incidental irradiation, so the more important applications of protons may be in pediatrics. Proton therapy may lead to new patterns of cost-benefit analysis and influence decision making across disciplinary lines.

This symposium is not only for those with a proton facility, but also for those who seek greater familiarity for its own merits or are considering establishing a proton facility. The schedule is organized into blocks. The first covers proton physics, radiobiology, facility options, treatment planning, and delivery. There is a tour of the Francis H. Burr Proton Therapy Center at MGH. The second covers outcomes analysis. The third covers the application to and results to date of proton therapy for medulloblastoma, ependymoma, craniopharyngioma, optic glioma, other astrocytomas, and spinal cord neoplasms. The fourth covers the relevant clinical protocols.

### Attendance Limited

### Program on Reverse Side

Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. Harvard Medical School designates this educational activity for a maximum of 17 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should only claim credit commensurate with the extent of the participation in the activity.

### REGISTRATION INFORMATION:

**Tuition Fee - \$495 (USD). Reduced Fee for Residents/Fellows in Training** (\*a letter of verification from the Department Chair must accompany the registration form for a reduced fee) and **Allied Health Professionals - \$330 (USD)**. All foreign payments must be made by a draft on a United States bank. If paying by check, make it payable to *Harvard Medical School* and mail with the completed registration form to: **Harvard Medical School Department of Continuing Education, P.O. Box 825, Boston, MA 02117-0825**. If paying by credit card, please register online at [www.protonpedi.org](http://www.protonpedi.org). **Telephone or mail-in registration with credit card payment is not accepted.** Inquiries should be directed to the above address, made by phone: (617) 384-8600, Monday–Friday, 10 A.M. to 4 P.M. (EST), or by e-mail: [hms-cme@hms.harvard.edu](mailto:hms-cme@hms.harvard.edu). Upon receipt of registration a confirmation letter will be mailed to the address listed on the form.

**Please Note: Program changes/substitutes may be made without notice.**

### CALL FOR ABSTRACTS:

Submission of original scientific abstracts related to proton therapy and clinical outcomes is encouraged. Abstracts must be received by February 1, 2009 and will be reviewed by the program committee. Decisions about acceptance will be communicated via e-mail by March 1, 2009. Accepted abstracts will be presented as oral contributions (10 minutes) and/or posters. For complete information, please visit [www.protonpedi.org](http://www.protonpedi.org).

### ONLINE INFORMATION:

**To register or view course information online, visit our home page: [www.protonpedi.org](http://www.protonpedi.org).**

To ensure proper registration, please add the first **three characters** of the source code found at the bottom of the registration form.

### REFUND POLICY:

A handling fee of \$60 is deducted for cancellation. Refund requests must be received by mail or fax one week prior to the course. No refunds will be made thereafter.

### COURSE LOCATION:

All sessions will be held at the **Royal Sonesta Hotel Boston**, Cambridge, MA.

### ACCOMMODATIONS:

A limited number of rooms have been reserved at the Royal Sonesta Hotel (Telephone: 617-806-4200) until March 25, 2009. Please specify that you are enrolled in this course to receive a reduced room rate of \$199 Single/Double per night. A map of Boston listing local hotels will be sent with your confirmation of enrollment.

### TRAVEL:

For information on reduced airfare, call Harvard Medical School Department of Continuing Education at (617) 384-8600, Monday–Friday, 10 A.M. to 4 P.M. (EST)

## PEDIATRIC NEURO-ONCOLOGY IN THE PROTON ERA Class #2924193

April 16–17, 2009

**Tuition Fee: \$495 (USD)**

**Residents\*/Fellows in Training\* and Allied Health Professionals: \$330 (USD)**

**Check is enclosed:** Please make your check payable to *Harvard Medical School* and mail it with this registration form to:  
**Harvard Medical School-Department of Continuing Education, P.O. Box 825, Boston, MA 02117-0825**

Please Print Clearly

Name \_\_\_\_\_ Degree \_\_\_\_\_  
First Middle Initial Last

Mailing Address \_\_\_\_\_  
Street City State Zip Code

Daytime Phone (\_\_\_\_) \_\_\_\_\_ Fax Number (\_\_\_\_) \_\_\_\_\_

E-Mail Address \_\_\_\_\_  Please check if you wish to be **excluded** from receiving email notices of future HMS-DCE programs.

Professional School Attended \_\_\_\_\_ Year of Graduation \_\_\_\_\_

Profession \_\_\_\_\_ Organization Affiliation \_\_\_\_\_

Principal Specialty \_\_\_\_\_ Board Certified: Yes  No

\* A letter of verification from Department Chair must accompany the registration form for a reduced fee.

Registrations paid by credit card may be made online at: [www.protonpedi.org](http://www.protonpedi.org)  
Please Note: Telephone or mail-in registration with credit card payment is not accepted.

Online Registrants. Add the first **three characters** of the source code found here ⇨

Source Code: **WEB**

# PEDIATRIC NEURO-ONCOLOGY IN THE PROTON ERA

Royal Sonesta Hotel Boston

Thursday, April 16, 2009

7:00 A.M.	<b>Registration and Continental Breakfast</b>	
8:00	Welcome .....	William E. Butler, MD
8:15	Pediatric Neuro-Oncology in the Proton Era.....	William E. Butler, MD
8:45	The History of Medical Uses of Fast Protons.....	Paul H. Chapman, MD
9:15	Proton Therapy: Status in 2009 .....	Jay S. Loeffler, MD
10:00	<i>Refreshment Break/Visit Exhibits</i>	
10:30	Establishing a New Proton Facility.....	Stephen M. Hahn, MD
11:15	Proton Treatment Planning for Pediatric Nervous System Neoplasms .....	Judith A. Adams, CMD
12:00 P.M.	<i>Lunch</i>	
1:00	Immobilization and Beam Verification for Children Undergoing Proton Therapy.....	Alvaro H. Hernandez
1:30	Pediatric Anesthesia for Proton Therapy .....	Nishan G. Goudsouzian, MB, BCh
2:00	Quality of Life Outcome Measures for Children with Nervous System Neoplasm.....	Karen A. Kuhlthau, PhD
2:30	<i>Refreshment Break/Visit Exhibits</i>	
2:45	Neuropsychological Outcome Measures for Children with Nervous System Neoplasm.....	Margaret B. Pulsifer, PhD
3:15	Health Status of Survivors of Pediatric Nervous System Neoplasms.....	Charles A. Sklar, MD
4:00	Research Opportunities Based on Photon Benchmark Outcomes for Localized Pediatric Brain Tumors: Focus on Cognitive and Endocrine Effects .....	Thomas E. Merchant, DO, PhD
4:45	Abstracts: Physics, Technology, Engineering, Facilities	
6:00	Tour of Francis Burr Proton Treatment Center at MGH .....	Torunn I. Yock, MD, MCH

Friday, April 17, 2009

7:00 A.M.	<b>Registration &amp; Continental Breakfast</b>	
8:00	Proton Therapy for Medulloblastoma, Ependymoma, and Other Posterior Fossa Neoplasms.....	Nancy J. Tarbell, MD
8:45	Proton Therapy for Optic Glioma, Craniopharyngioma, and Other Supratentorial Neoplasms.....	Torunn I. Yock, MD, MCH
9:30	Proton Therapy for Skull Base and Mesenchymal Neoplasms.....	Norbert J. Liebsch, MD, PhD
10:00	<i>Refreshment Break/Visit Exhibits</i>	
10:30	Comprehensive Management of Spine Neoplasms .....	David H. Ebb, MD
11:15	Survival and Late Effects Following Chemotherapy for Pediatric Nervous System Neoplasm Patients.....	Roger J. Packer, MD
12:00 P.M.	<i>Lunch</i>	
1:00	Which Modality? Lessons from Comparative Treatment Planning.....	Torunn I. Yock, MD, MCH
1:30	The Quaternary Care of Pediatric Neuro-Oncology Patients.....	William E. Butler, MD
2:00	Proton-Specific Protocols for Pediatric Neuro-Oncology.....	Torunn I. Yock, MD, MCH
2:30	<i>Refreshment Break/Visit Exhibits</i>	
2:45	Adapting Protons to Existing Protocols in Pediatric Neuro-Oncology .....	Torunn I. Yock, MD, MCH
3:15	Panel Discussion: Cases & Discussion .....	<b>Moderator:</b> Nancy J. Tarbell, MD <b>Panelists:</b> William E. Butler, MD; David H. Ebb, MD; Roger J. Packer, MD; Torunn I. Yock, MD, MCH
4:15	Abstracts: Clinical Outcomes	
5:15	Closing Remarks .....	William E. Butler, MD
5:30	Adjourn	

## Guest Faculty

**Stephen M. Hahn, MD**, Henry K. Pancoast Professor of Radiation Oncology; Chairman of Radiation Oncology, University of Pennsylvania School of Medicine

**Thomas E. Merchant, DO, PhD**, Chief, Division of Radiation Oncology, St. Jude Children's Research Hospital

**Roger J. Packer, MD**, Professor of Neurology and Pediatrics; Executive Director, Center for Neuroscience and Behavioral Medicine, Children's National Medical Center

**Charles A. Sklar, MD**, Professor of Pediatrics, Cornell Weill College of Medicine; Director, Long-Term Follow-Up Program, Memorial Sloan-Kettering Cancer Center

## Massachusetts General Hospital Faculty

**Judith A. Adams, CMD**

**William E. Butler, MD**, Assistant Professor of Surgery

**Paul H. Chapman, MD**, Nicholas T. Zervas Professor of Neurosurgery; Unit Chief, Pediatric Neurosurgery; Director, Proton Radiosurgery Group

**David H. Ebb, MD**, Assistant Professor of Pediatrics

**Nishan G. Goudsouzian, MB, BCh**, Professor of Anesthesia

**Alvaro H. Hernandez**

**Hanne M. Kooy, PhD**, Associate Professor of Radiation Oncology

**Karen A. Kuhlthau, PhD**, Assistant Professor of Pediatrics

**Norbert J. Liebsch, MD, PhD**, Assistant Professor of Radiation Oncology

**Jay S. Loeffler, MD**, Herman and Joan Suit Professor of Radiation Oncology; Chief, Radiation Oncology

**Margaret B. Pulsifer, PhD**, Assistant Professor of Psychiatry

**Nancy J. Tarbell, MD**, C.C. Wang Professor of Radiation Oncology; Dean for Academic and Clinical Affairs, Harvard Medical School

**Torunn I. Yock, MD, MCH**, Assistant Professor of Radiation Oncology; Director of Pediatric Radiation Oncology