## DESCRIPTION

Proton therapy is the most technologically advanced method to delivery radiation treatments to cancerous tumors available today. The unique characteristics of how protons interact within the human body allow it to deliver curative radiation doses while reducing doses to healthy tissues and organs resulting in potentially fewer complications and side effects than standard radiation therapy. Understanding how proton therapy works provides patients and physicians with insight into the clinical advantages of this treatment modality and the appropriate indications. In this course, practitioners from all specialties and backgrounds are invited to learn about the fundamentals of proton therapy, available clinical evidence, and promising indications to the benefit of their clinical practice. Understanding the appropriate utilization of this precise technology will allow for implementation of the highest quality care.

## TARGET AUDIENCE

This activity is for physicians including primary care physicians, oncologists, surgeons, diagnostic physicians, and radiation oncologists.

## OBJECTIVES

After participating this activity, the learner will demonstrate the ability to:

- Distinguish the basic physics of photon and proton therapy.
- Describe the rationale and theoretical advantages for proton therapy.
- Identify the currently available, evidence-based guidelines for proton therapy in various adult and pediatric disease sites.
- Explore the evolving and future indications for scanning beam proton therapy.

## ACCREDITATION STATEMENT

The Johns Hopkins University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

## CREDIT DESIGNATION STATEMENT

The Johns Hopkins University School of Medicine designates this live activity for a maximum of 3 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## MAINTENANCE OF CERTIFICATION

American Board of Radiology (ABR) Effective September 17, 2020, The Proton Therapy Course - A Virtual Learning Experience has been qualified for 3 SAM credits by the American Board of Radiology in meeting the criteria for self-assessment toward the purpose of fulfilling requirements in the ABR Maintenance of Certification Program.

## OTHER CREDITS

**American Academy of Nurse Practitioners National Certification Program** accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

**American Nurses Credentialing Center (ANCC)** accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

**National Commission on Certification of Physician Assistants (NCCPA)**
PAs may claim a maximum of 3 Category 1 credits for completing this activity. NCCPA accepts *AMA PRA Category 1 Credit™* from organizations accredited by ACCME or a recognized state medical society.

## POLICY ON PRESENTER AND PROVIDER DISCLOSURE

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The following relationships have been reported for this activity:

| NAME | ROLE | RELATIONSHIPS |
|---|---|---|
| Russell Hales, MD | Presenter | **Contracted Research**: Genentech, Inc. |
| Lawrence Kleinberg, MD | Presenter | **Contracted Research/Principal Investigator:** Accuray Incorporated and Novacure |
| Marikki Laiho, MD, PhD | Presenter | **Royalty/Principal Investigator:** Bluefield Innovations |
| Benjamin Levy, MD | Presenter | **Consulting Fee:** AstraZeneca; Merck and Company, Inc.; Takeda Pharmaceuticals, Inc.; Eli Lilly and Company and Genentech, Inc.<br>**Contracted Research**: Boehringer Ingelheim Vetmedica GmbH<br>**Principal Investigator/Consulting Fee:** Celgene |
| Amol Narang, MD | Presenter | **Contracted Research/Principal Investigator:** Boston Scientific Corporation |
| Kristin Redmond, MD, MPH | Presenter | **Contracted Research/Honoraria:** Accuray<br>**Principal Investigator:** BioMimetix<br>**Contracted Research:** Elekta AB |

| | | |
|---|---|---|
| Daniel Song, MD | Presenter | **Contracted Research:** Bayer Corporation<br><br>**Principal Investigator/Contracted Research:** Bristol Myers Squibb and BioProtect |
| Christina Tsien, MD | Presenter | **Honoraria:** Merck and Company, Inc.; Varian and Blue Earth |
| Jean Wright, MD | Presenter | **Honoraria:** ASTRO **Royalty:** Up-to-date |

**No one else in a position to control the content of this educational activity has disclosed a relevant financial interest or relationship with any commercial interest.**

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## PROGRAM

| | |
|---|---|
| 5:00 | **Welcome, Introduction to Course Directors and Moderators and the Background to the Proton Center**<br>Akila Viswanathan, MD, MPH |
| 10:40 | **The Proton Potential: Historical vs. Modern Perspective**<br>Curtiland Deville, MD |
| 8:42 | **Biology of Proton Effects**<br>Marikki Laiho, MD, PhD |
| 10:24 | **Advances in Proton Physics: Where We're Going**<br>Heng Li, PhD |
| 13:51 | **The Greatest Gain: Pediatric Tumors and Toxicity Minimization**<br>Matthew Ladra, MD |
| 7:41 | **Challenging Cases in the Management of CNS Tumors**<br>Lawrence Kleinberg, MD and Kristin Redmond, MD, MPH |
| 20:00 | **Invited Plenary Talk: Lessons from Proton Re-Irradiation**<br>John Plastaras, MD, PhD |
| 18:46 | **Head and Neck Cancers: Progress in Proton Therapy**<br>Brandi Page, MD |
| 14:33 | **Breast Cancer:**<br>**The Role of Proton Radiotherapy in Node-Positive Breast Cancer: A Radiation Oncologist's Perspective**<br>Jean Wright, MD |
| 4:29 | **The Role of Proton Radiotherapy in Node-Positive Breast Cancer: A Surgeon's Perspective**<br>Maureen O'Donnell, MD |
| 10:00 | **Lung Cancer:**<br>**Contemporary Treatments with Immunotherapy and Proton Therapy**<br>Russell Hales, MD |
| | **Pushing the Tail of the Curve: Immunotherapy and Novel Radiation Approaches**<br>Benjamin Levy, MD |
| 13:40 | **Gastrointestinal (GI): The Potential of Protons in Challenging GI Sites**<br>Amol Narang, MD |
| 10:40 | **Genitourinary (GU): What's the Controversy Around Treating Prostate with Proton Therapy?**<br>Curtiland Deville, MD |
| 12:00 | **Putting the Patient First: Streamlining Proton Intake**<br>Elisabeth Tamasi, MSW |
| 5:00 | **Closing Comments**<br>Christina Tsien, MD and Akila Viswanathan, MD, MPH |

## ACTIVITY DIRECTOR

**Curtiland Deville, MD**
Clinical Director, Radiation Oncology
Johns Hopkins Kimmel Cancer Center Sibley Memorial Hospital
Associate Professor of Radiation Oncology and Molecular Radiation Sciences
Johns Hopkins University School of Medicine

## ACTIVITY CO-DIRECTOR

**Akila Viswanathan, MD, MPH**
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Professor of Radiation Oncology and Molecular Radiation Sciences
Johns Hopkins University School of Medicine

## JOHNS HOPKINS SPEAKERS

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Assistant Professor of Radiation Oncology and Molecular Radiation Sciences
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## GUEST SPEAKER

**John Plastaras, MD, PhD**
Chief, Gastrointestinal/Lymphoma Service, Radiation Oncology
Associate Professor of Radiation Oncology at the Hospital of the University of Pennsylvania
Philadelphia, PA

## FEES

**REGISTRATION CUT-OFF DATE: FEBURARY 6, 2023**
**REGISTER HERE:** https://hopkinscme.cloud-cme.com/course/courseoverview?p=0&eid=30581

Methods of Payment**: We require full payment prior to the start of the activity.**
Registration Fee: **$325**

## CANCELLATION POLICY

The Johns Hopkins University reserves the right to cancel or postpone any activity due to unforeseen circumstances. In this event, the University will refund the registration fee. Under such circumstances registrants will be notified as soon as possible.

A handling fee of $25 will be deducted for cancellation. An additional fee may apply for cancellation of other events, including workshops and social activities. Transfer of registration to another Johns Hopkins activity in lieu of cancellation is not possible.

## COURSE FORMAT – METHOD OF PARTICIPATION

This enduring material is expected to take approximately 3 hours to complete. Once the activity is completed, you must pass the post-test and complete the online evaluation with attestation to receive CME credit.

## HOW TO OBTAIN CME CREDIT

To register, please visit https://hopkinscme.cloud-cme.com/course/courseoverview?p=1&eid=30581 and complete the registration. Once registered, click “Content & Tests” to view the content and complete the post-test and evaluation.

The content is available at: https://hopkinscme.cloud-cme.com/course/courseoverview?p=1&eid=30581

## RELEASE DATE

February 6, 2021

## EXPIRATION DATE

February 6, 2023

## HARDWARE/SOFTWARE REQUIREMENTS

Internet connection.

## EVALUATION AND OUTCOMES SURVEY

Post activity, an online evaluation form will be available to attendees to evaluate the activity and identify future educational needs. Upon completion of the evaluation, the learner must attest to the number of hours in attendance. A certificate of attendance will be available immediately for download or print. The last day to evaluate the material and attest to your credits is **February 6, 2023**.

## POST-TEST

A post-test will be conducted at the conclusion of the activity. A grade of at least 70% within three attempts is needed to receive CME credit.

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## FOR FURTHER INFORMATION

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