Penn Radiation Oncology Medical Physics Residency Program

Program information 2023-2024

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Welcome to our program!

We are a CAMPEP-accredited program designed to educate and train physicists in all aspects of modern radiation oncology physics. Our major components of the two-year residency are: rotations, clinical services, topic-specific didactics, and research. Our program allows the trainee to complete the ABR certification in the specialty of Therapeutic Medical Physics.

Program size
- Current size: 11 residents
  - 5 two-year positions per year
  - 1 three-year position per year (non-match, off-cycle)

Program diversity
- 17 alumni (5 current)
- 40 alumni (6 current)
- PhD: 41 alumni (8 current)
- MS: 15 alumni (3 current)

Professional development
- Generous funding for travel to conferences and educational expenses
- Textbooks, dedicated work phone for clinical use
- Custom business cards
- Board examination fee coverage
- Reimbursement for after-hours transportation

Highlights
- 100% job placement before graduation & ABR pass rate on first attempt in the past five years

Benefits
- Medical, dental, and vision plan
- Drug prescription plan
- Employee Life Insurance
- Tax-Deferred Retirement Plan
- Vacation and sick pay
Clinical activities & responsibilities

Each resident is assigned to 2-3 clinical shifts per week, the other days are free for rotation reading, rotation activities, or research. Throughout the whole residency, it is expected that the resident performs in-vivo dosimetry, monthly & annual QA (linacs, protons, CT), mock LINAC commissioning experience, HDR QA, clinical physics staff support services, etc.

<table>
<thead>
<tr>
<th>Early shift</th>
<th>Regular shift</th>
<th>Late shift</th>
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<tbody>
<tr>
<td>6am - 2pm</td>
<td>9am - 5pm</td>
<td>2pm - end of treatment</td>
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<tr>
<td>• Checking morning QA</td>
<td>• Machine troubleshooting</td>
<td>• Photon patient-specific QA</td>
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<tr>
<td>• Machine troubleshooting</td>
<td>• Assisting clinical activities</td>
<td>• Proton patient-specific QA</td>
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<tr>
<td>• Assisting clinical activities (initial and weekly chart checks, 4DCT acquisitions)</td>
<td>(dosimetry support tasks, initial and weekly chart checks, 4DCT acquisitions, etc.)</td>
<td>• Machine performance checks</td>
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Click here for a virtual tour of our facility, narrated by past residents.
Rotations

Our 2-year clinical training program provides a robust curriculum that prepares its alumni to compete for top positions in the field. It is structured into 9 rotations, where the first year is spent largely in didactic instruction and clinical rotations while the second year can be tailored to the individual's personal interests or career goals.

Residents work closely with their mentors throughout the duration of the program, thus ensuring they acquire fundamental knowledge and meet the practical objectives of each rotation.

Learn more about each individual rotation in our program overview prezi made by current residents!
A highlight of Penn’s program is the experience residents gain working with innovative treatment technologies. In addition to Roberts Proton Therapy Center, Penn Medicine was the first in the world to use The Varian Halcyon™. Other distinguishing features include modalities such as Gamma Knife, CyberKnife, etc.

**Perelman Center for Advanced Medicine**
- 5 Varian Linear Accelerator vaults (3 TrueBeams & 2 Halycons)
- 5 IBA Pencil Beam Scanning Proton vaults
- 2 Dual Energy CT Simulators
- PET/CT and MRI Simulators
- Newly renovated HDR brachytherapy suite

**Pennsylvania Hospital**
- 2 Varian Linear Accelerators:
  - Edge with HyperArc
  - Clinac
- Gamma Knife Icon
- HDR brachytherapy

**Lancaster General Hospital**
- Varian ProBeam 360° Proton System
- Cyberknife M6
- 4 Varian Linear Accelerators:
  - 2 TrueBeams
  - 2 Halycons
- HDR brachytherapy
When you join the Penn community, you become part of a vast alumni network that opens doors to opportunities with leading conventional radiation and proton therapy programs throughout the country and beyond. Program alumni have successfully acquired positions in academic medicine and private practice. Current placements include:

- University of Pennsylvania
- University of California, San Francisco
- The Ohio State University

*There is a small number of alumni in other countries.*

Their stories

“There’s a reason for Penn’s reputation: All of the latest instruments and technology are available. But Penn’s knowledgeable, experienced faculty is really what makes the difference. Everywhere I turned, there was someone there to answer my question.

Ahmet Ayan, PhD, 11’

The Penn mentorship program is one of a kind. I learned extremely valuable lessons from my mentors and they always went above and beyond to make sure my education was their top priority.

Austin Kassaee, MS, 23’
Life in Philly

A City of Neighborhoods
From sleek skyscrapers to charming brownstones, each region of the city has its own distinct pulse.

Affordable Living
Most affordable major city on the east coast.

Enriching
Center of history, visual and culinary arts, music and professional sports.

Flexible Transportation
Most areas of the city are easily accessible via walking, biking, or public transportation.

Learn more about the physics resident perspective through our newsletter.

See our resident-created virtual guide of Philadelphia on Google Maps!