

**Welcome to  
The University of Texas MD Anderson Cancer Center**

**Proton Therapy Center – Houston, TX  
1840 Old Spanish Trail  
Houston, TX 77054**

# **Two Week Course Curriculum Catalog**

THE UNIVERSITY OF TEXAS  
**MD Anderson**  
~~Cancer Center~~  
Proton Therapy  
Making Cancer History®

Welcome to MD Anderson Cancer Center and the Proton Therapy Center in Houston, TX. We are excited that you have chosen our world-class facilities to further your knowledge and understanding of proton therapy. With the most innovative technology and a multidisciplinary team approach, our cancer experts include radiation oncologist, physicists, medical dosimetrists, nurses, anesthesiologist, radiation therapist and others.

Depending on the training track(s) you have chosen, over the course of the next week(s), our goal is to educate you on Clinical Operations, Treatment Planning and/or Physics and Service Maintenance. Any one or all three of these tracks will better prepare you as you engage in new frontiers with proton therapy and extend its benefits to patients with a wide range of cancers.

Thank you and enjoy the program!

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Medical Director, Proton Therapy Center

**Brandon Gunn, MD**

Associate Medical Director, Proton Therapy Center

**Matthew Palmer, MBA, CMD**

Chief Operating Officer, PTC-H

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**Mayankkumar Amin, CMD**

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**Beth De Gracia, RN**

Research Nurse Supervisor

**Kristin Jones, MBA**

Program Coordinator

**Lee Chamblee, MBA**

Education Program Coordinator

## 2 Week Training Course

### September 11 –23, 2017

#### Week 1 (Clinical & Operations)

Monday	Introduction to Proton Therapy - Clinical	2 hours
Monday	Introduction to Proton Therapy - Physics	1.5 hours
Monday	Operations & Facilities	3 hours
Monday	Service Maintenance	1 hour
Tuesday	Nursing Overview/Clinical Nutrition	2 hours
Tuesday	MDs (disease site specific)	6 hours
Wednesday	MDs (disease site)/MLPs/Pedi Anesthesia	7 hours
Thursday	MDs (disease site specific)/Pediatrics	5 hours
Friday	Research (Nurses)	2.5 hours
Friday	International Patient Center	1 hour
Friday	Financial Clearance (Optional)	2 hours

#### Week 2 (Treatment Planning and Physics + Service Maintenance)

Monday	Dosimetrist (6 hrs.) / Physicists (2 hrs.)	6.5 hours
Tuesday	Dosimetrist (6 hrs.) / Physicists (2 hrs.)	8 hours
Wednesday	Dosimetrist (6 hrs.) / Physicists (2 hrs.)	7 hours
Thursday	Dosimetrist (6 hrs.) / Physicists (2 hrs.)	5 hours
Friday	Dosimetrist (6 hrs.) / Physicists (2 hrs.)	7.5 hours
Saturday	Physicist	7 hours

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**Proton Therapy**

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## Educational Objectives

After attending the conference, participants should be able to

- Incorporate the knowledge and skills learned through hands-on practice sessions to better prepare for proton therapy treatments, thus improving patient outcomes (*knowledge, competence, performance, patient outcomes*),
- Interpret the effectiveness of proton therapy to assess which intervention would be most appropriate for patients with different solid tumor cancer diagnoses (*knowledge, competence*),
- Assess how an interprofessional system will improve the quality of care for patients receiving proton therapy (*knowledge, competence*),
- Utilize proton therapy clinical trials and assess their outcomes for a better understanding of the importance and significance in the treatment of cancer (*knowledge, competence, performance*),
- Gain a greater appreciation and perspective of the steps and personnel needed to perform quality proton therapy (*knowledge, competence*).

## Target Audience

This activity is intended for physicians and fellows in medical oncology, surgical oncology, radiation oncology, pediatrics and radiology, clinical research nurses in oncology and trainees.

## Evaluation

A course evaluation form will provide participants with the opportunity to comment on the value of the program content to their practice decisions, performance improvement activities, or possible impact on patient health status. Participants will also have the opportunity to comment on any perceived commercial bias in the presentations as well as to identify future educational topics.

## Accreditation/Credit Designation

The University of Texas MD Anderson Cancer Center is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The University of Texas MD Anderson Cancer Center designates this live activity for a maximum of 57.25 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## CME Certificates and Attendance Verification Certificates

Certificates awarding *AMA PRA Category 1 Credit*<sup>™</sup> or certificates documenting attendance will be distributed to participants when an individual departs the conference. To obtain a CME certificate, physicians must submit a completed evaluation questionnaire and a *CME Verification Form*.

Upon request, a record of attendance (certificate) will be provided on-site to other health care professionals for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

The University of Texas MD Anderson Cancer Center has implemented a process whereby everyone who is in a position to control the content of an educational activity must disclose all relevant financial relationships with any commercial interest that could potentially affect the information presented. MD Anderson also requires that all faculty disclose any unlabeled use or investigational use (not yet approved for any purpose) of pharmaceutical and medical device products. Specific disclosure will be made to the participants prior to the educational activity.

Agendas are subject to change because we are always striving to improve the quality of your educational experience. MD Anderson may substitute faculty with comparable expertise on rare occasions necessitated by illness, scheduling conflicts, and so forth.

Photographing, audio taping, and videotaping are prohibited.

## **Week 1 (Clinical & Operations) Course Breakdown**

### **Monday, September 11 – Operations & Facilities and MDs (disease site specific)**

- 9:00am – 9:30am      Registration + Breakfast
- 9:30am – 10:20am      Welcome Video + Tour
- 10:20am – 11:00am      Introduction to Proton Therapy – Clinical
- 11:00am – 11:15am      Break**
- 11:15am – 12:30pm      Introduction to Proton Therapy – Physics
- 12:30pm – 1:30pm      Lunch with Dr. Cox**
- 1:30pm – 3:30pm      (Operations/Facilities) Overview of Proton Therapy Center  
(Patient flow, staffing, special consideration)
- 3:30pm – 3:45pm      Break**
- 3:45pm – 4:45pm      Service Maintenance
- 4:45pm – 6:00pm      Social Event Meet & Greet with Presenters

### **Tuesday, September 12 – MDs (disease site specific); Nursing and Clinical Nutrition**

- 9:00am – 10:00am      MD) Head & Neck (H&N) Evidence/Literature
- 10:00am – 11:15am      (MD) H&N Way of Treatment
- 11:00am – 11:15am      Break**
- 11:15am – 12:00pm      (MD) Head & Neck (H&N) Case Presentation
- 12:00pm – 1:00pm      Lunch**
- 1:00pm – 1:30pm      Nursing Presentation
- 1:30pm – 2:00pm      Child Life Advocacy

2:00pm – 2:30pm	Clinical Nutrition
<b>2:30pm – 2:45pm</b>	<b>Break</b>
2:45pm – 3:15pm	Radiation Therapy
3:15pm – 4:30pm	(MD) Lung MDACC way of treatment + presentation

**Wed., September 13 – MDs (disease site specific); MLPs and Pediatric Anesthesia**

8:30am – 9:15am	(MD) Lung Evidence/Literature
9:15am – 10:00am	(MD) Lung Quality Safety
<b>10:00am – 10:15am</b>	<b>Break</b>
10:15am – 11:00am	MLPs (Side effects, exams, problems, writing Rx's)
11:00am – 12:00pm	Pediatric Anesthesia
<b>12:00pm – 1:00pm</b>	<b>Lunch</b>
1:00pm – 2:00pm	(MD) (CNS) Evidence/Literature
2:00pm – 2:30pm	(MD) Central Nervous System - Quality & Safety
<b>2:30pm – 2:45pm</b>	<b>Break</b>
2:45pm – 3:15pm	(MD) (CNS) MDACC way of treatment
3:15pm – 3:45pm	(MD) (CNS) Case Presentation

**Thursday, September 14 – MDs (disease site specific)**

8:00am – 9:00am	(MD) Genitourinary - Prostate (GU) Evidence/Literature
9:00am – 9:45am	(MD) Genitourinary - Prostate (GU) Case Presentation
<b>9:45am – 10:00am</b>	<b>Break</b>

10:00am – 11:00am	Observation of Treatment (Gantry)
11:00am – 12:00pm	(MD) Pediatric Evidence/Literature
<b>12:00pm – 1:00pm</b>	<b>Lunch</b>
1:00pm – 1:30pm	(MD) Pediatric – Quality & Safety
1:30pm – 2:30pm	(MD) Pediatric MDACC Way of Treatment
<b>2:30pm – 2:45pm</b>	<b>Break</b>
2:45pm – 3:15pm	(MD) Pediatric Case Presentation

**Friday, September 15 – Research Nurses, International Center, and Financial Clearance**

9:00am – 9:45am	Fundamentals of Clinical Research
9:45am – 10:15am	(Research) Overview of exciting clinical trials and prospective/QOL studies at the PTC
10:15am – 10:35am	(Research) Overview of clinical research at the RCCs and collaborative studies where MDACC is the lead site/collaborating site
<b>10:35am – 10:45am</b>	<b>Break</b>
10:45am – 11:00am	(Research) Overview of interesting studies for our pediatric patients
11:00am – 11:10am	(Research) Overview of future projects
<b>11:10am – 12:10pm</b>	<b>Lunch</b>
12:10pm – 12:40pm	International Patient Center
12:40pm – 1:10pm	Language Assistance
1:10pm – 1:20pm	Insurance Welcome + Video
1:20pm – 1:50pm	New Patient Referral
1:50pm – 2:20pm	Insurance Authorization Process

<b>2:20pm – 2:35pm</b>	<b>Break</b>
2:35pm – 2:50pm	Denials & Appeals
2:50pm – 3:00pm	Final Insurance Approval Process

## **Week 2 (Treatment Planning & Physics) Course Breakdown**

### **Monday, September 18 – Dosimetry/Physics**

9:00am – 9:30am	Registration/Breakfast + Welcome Address/Video
9:30am – 10:45am	Overview of Proton Therapy Physics
<b>10:45am – 11:00am</b>	<b>Break</b>
11:00am – 12:45pm	Overview of PT Treatment planning
<b>12:45pm – 1:30pm</b>	<b>Lunch</b>
1:30pm – 1:50pm	Tour of PTC
1:50pm – 3:50pm	Dosimetry – Treatment Planning & Demo for Prostate (PSPT and SFO)
<b>3:50pm – 4:00pm</b>	<b>Break</b>
4:00pm – 4:45pm	Physics – Intro. Motion Management (Adaptive for lung)

### **Tuesday, September 19 – Dosimetry/Physics**

8:00am – 9:45am	Dosimetry – Treatment Planning & Demo for Lung (PSPT and SFO)
<b>9:45am – 10:00am</b>	<b>Break</b>
10:00am – 12:00pm	Dosimetry – Treatment Planning & Demo for Esophagus (PSPT and SFO)



<b>12:00pm – 1:00pm</b>	<b>Lunch</b>
1:00pm – 2:30pm	Dosimetry – Treatment Planning & Demo for Head & Neck (SFO & MFO)
<b>2:30pm – 2:40pm</b>	<b>Break</b>
2:40pm – 4:00pm	Dosimetry – Treatment Planning & Demo for Head & Neck (SFO & MFO)
4:00pm – 5:00pm	Physics – Introduction to robust optimization

### **Wednesday, September 20 – Dosimetry**

8:00am – 10:15am	Dosimetry – Treat. Plan. & Demo for CSI
<b>10:15am – 10:30am</b>	<b>Break</b>
10:30am – 12:00pm	Dosimetry – Treat. Plan. & Demo for CNS
<b>12:00pm – 1:00pm</b>	<b>Lunch</b>
1:00pm – 2:45pm	Dosimetry – Treat. Plan & Demo GI (Liver)
<b>2:45pm – 3:00pm</b>	<b>Break</b>
3:00pm – 4:15pm	Dosimetry – Treat. Plan & Demo APBI (Partial Breast)

### **Thursday, September 21 – Physics**

9:00am – 11:00am	Physics – Commissioning Passive Scattering (including CT calibration for proton therapy)
<b>11:00am – 11:15am</b>	<b>Break</b>

11:15am – 12:20pm    Physics – Commissioning Spot Scanning

**12:20pm – 1:20pm    Lunch**

1:20pm – 1:50pm    Treat. Plan. Sys. Commissioning – Passive

1:50pm – 3:00pm    Treat. Plan. Syst. commissioning – Scanning

### **Friday, September 22 – Physics**

8:00am – 8:50am    Proton Dose Calculation Algorithms

8:50am – 9:45am    Advanced Optimization for Scanning Beam (robust optimization and robust analysis)

**9:45am – 10:00am    Break**

10:00am – 10:45am    Advanced motion management

10:45am – 11:45am    Machine QA for passive scattering

**11:45am – 12:45pm    Lunch**

12:45pm – 1:45pm    Machine QA for scanning

1:45pm – 2:30pm    Patient specific QA for passive scattering

**2:30pm – 2:45pm    Break**

2:45pm – 3:30pm    Patient specific QA for scanning

### **Saturday, September 23 – Physics**

8:00am – 4:00pm    Observation

# PTC Training Registration Fees

## One – Two Weeks

### **Program 1 – Clinical & Operations (5 days)**

**(Week 1)** (5 days – Mon – Fri) = **\$3,200** registration fee

### **Program 2 – Treatment Planning (Dosimetrist) (3 days)**

**(Week 2)** (3 days – Mon – Wed) = **\$2,600** registration fee

### **Program 3 – Physics (Physicist) (3 days)**

**(Week 2)** (3 days – Thurs – Sat) = **\$2,600** registration fee

### **Program 4 – Treatment Planning + Physics (6 days)**

**(Week 2)** (6 days – Mon – Sat) = **\$5,000** registration fee

### **Program 5 – Clinical & Operations + Treatment Planning + Physics (11 days)**

**(Weeks 1 & 2)** (11 days – Mon – Sat) = **\$8,000** registration fee