

## EDUCATION



**RESIDENT  
BOOT  
CAMP**  
**ATS 2018**  
San Diego, CALIFORNIA



*We help the world breathe®*  
PULMONARY • CRITICAL CARE • SLEEP

## **Background**

Fellowship training in Pulmonary and Critical Care Medicine (PCCM) is a demanding endeavor. Depending on the training program, fellowship candidates may have as little as 18 clinical months in which to learn inpatient pulmonary, outpatient pulmonary, as well as critical care medicine. To meet this need, in 2014 the American Thoracic Society (ATS) Resident Boot Camp (RBC) was created in an effort to better equip pulmonary and critical care incoming fellows with the information and skills needed to flourish during day one of fellowship.

## **Course Objectives**

The goal of this course is to prepare physicians who are starting their adult and pediatric pulmonary and critical care fellowship in the coming academic year. The course provided hands-on training of skills that they can use day-one of fellowship with an emphasis on:

- Airway management including endotracheal intubation
- Fiberoptic bronchoscopy and accompanying procedures
- Noninvasive and invasive ventilator management
- Thoracentesis
- Calibration and operation of hemodynamic recording systems
- Supervision of the technical aspects of pulmonary function testing
- Insertion and management of chest tubes
- Proficiency in use of ultrasound

## **Curriculum Design**

The RBC course includes didactic presentations, small breakout session, and hands-on skill-base workshops. To facilitate near-peer learning, as well as to train the next generation of educators, most breakout and hands-on sessions are taught by senior and junior faculty known to be experts in the field, paired with fellows serving as apprentice educators. The fellows led these sessions with assistance and direction provided by the faculty co-teacher. In 2015, the ATS RBC was expanded to include a pediatric pulmonary and critical care-specific curriculum.

## **International Boot Camp**

In 2018, the Boot Camp expanded its curriculum to include an International track. The course had representation from fellows from Indonesia.

# 2018 Boot Camp Leadership

**Geoffrey Connors, MD**  
Adult Track Chair

**Edith Zemanick, MD**  
Pediatric Track, Chair

**Deborah Liptzin, MD**  
Pediatric Track, Chair

**Matt Drake, MD**  
Chair of Large Group Sessions

**Kristin Burkart, MD, MSc**  
Advisor of Large Group Sessions

**Nirav Shah, MD**  
Chair of Hands On Sessions

**Laura Crotty Alexander, MD**  
RBC Leadership and Founder

**Jennifer Ingram, PhD**  
Advisor of Small Group Sessions

**Patricia Kritek, MD, EdM**  
RBC Leadership

**May Lee, MD**  
RBC Assessment and Course Evaluation

**Isabel Pedraza, MD**  
Chair of Small Group Sessions

**Samir Makani, MD**  
Chair of Hands on Sessions

**Brendan Clark, MD, MS**  
International Boot Camp Chair  
RBC Leadership

**Ryan Good, MD**  
Chair of Hands On Session  
(Peds Track)

**Eileen Larsson, Lauren Lynch &  
Jennifer Siegel-Gasiewski**  
ATS Staff





# Lectures & Small Group Teaching

## Adult Track



### Expert Lead & Interactive Workshops

#### ICU Emergencies

Andrew Luks, MD

#### Top Pulmonary Consults

Jennifer McCallister, MD

#### Primer for the Pulmonary Clinic

James Beck, MD

#### How to Run a Code

Tisha Wang, MD

#### How to Read a Chest CT

Jonathan Chung, MD

### Small Group Discussions

#### PFT Interpretation

Leaders: Drs. Tristian Huie  
and Maryl Krieder

#### Critical Care Waveforms

Leaders: Drs. Patricia Kritek  
and Talal Dahhan

#### Pulmonary Physiology

Leaders: Brendan Clark, MD, MS

#### Pragmatics of Pulmonary Medicine

Leaders: Drs. Isabel Pedraza  
and Jennifer Possick

# Hands on Workshops

## Adult Track



### **Bronchoscopy 101 & Bronchoscopy for Hotshots**

**Leaders: Drs. Samir Makani and Rosemary Adamson**

"I feel more empowered to use ultrasound on my patients  
and feel more comfortable with the bronchoscope"

# Hands on Workshops

## Adult Track



### **Airway 101 & Difficult Airway Management**

**Faculty Leaders: Drs. Anna Brady and Frank Schembri**

"The Difficult Airway station was really great because never before have I had the opportunity to attempt all the different ways of securing an airway in a no-stakes situation. But after today, I feel that if I have such a situation on my first day of fellowship I can approach it with more confidence and with actual tools to handle the situation (especially loved the critical airway card)"



# Hands on Workshops

## Adult Track



### **Mechanical Ventilation**

**Faculty Leaders: Drs. Ren Ashton  
and Neal Chaisson**

### **Non-Invasive Positive Pressure Ventilation**

**Faculty Leaders: Drs. Amy Atekson  
and Tyler Albert**

"The Resident Boot Camp made me feel like ATS really cares about its learners which makes me more excited, in general, to be at the conference and continue to go to the conference in years to come"

# Hands on Workshops

## Adult Track



### **Cardiac Ultrasound**

**Faculty Leaders: Drs. Lydia Chang  
and Antonio Gomez**

### **Lung and Pleural Ultrasound**

**Faculty Leaders: Drs. Amit Parulekar  
and Dan Sweeney**

"I feel a base level of competence in ultrasound assessment and it put me in touch with other people going through the same transition as I am in"



# Lectures & Expert Lead Workshops

## Pediatric Track



### Lectures

#### **Pulmonary Physiology**

Jordan Retting, MD

#### **Chest Imaging**

Don Hayes, MD

#### **How to Run a Code**

Ryan Good, MD

#### **Top Five Pediatric Pulmonary Consults**

Deb Liptzin, MD

#### **Heart and Lung Interactions**

Christopher Baker, MD

#### **Top Five Pediatric Breathing Emergencies**

Eric Zee, MD

#### **Top Five PICU Emergencies**

Erin Powell, MD

#### **Cystic Fibrosis**

Edith Zemanick, MD

### Expert Lead Workshops

#### **Approach to Acute and Chronic Respiratory Failure**

B. Louise Giles, MD

Erin Powell, MD

Marc Schecter, MD

#### **Physiology Case Studies**

Heather Hock, MD

Chantal Spencer, MD

Beth Allen, MD

#### **Case Studies in Sleep Medicine**

Ben Hughes, MD

Ignacio Tapia, MD

#### **Keys to Success**

Stephanie Davis, MD

Ross Myers, MD

Heather Hoch, MD

Ryan Good, MD

# Hands on Workshops

## Pediatric Track



### **Airway 101**

**Faculty Leaders: Drs. Ryan Good, Jordan Rettig and David Spielberg**

### **Bronchoscopy 101**

**Faculty Leaders: Drs. Dan Benscoter, John Brewington and Emily DeBoer**

“The Resident Boot Camp gave me more confidence in US and airway management, which are crucial in situations where I may not be able to wait for backup in an emergency. It was also nice to see the proficiency levels of other residents from other programs to know what my relative strengths and weaknesses are compared to my peers. It was also nice to handle a



# Hands on Workshops

## Pediatric Track

### **Non-Invasive Position Pressure Ventilation (NIPPV)**

**Faculty Leaders: Stephen Hawkins  
and Ignacio Tapia**

### **Pulmonary Function Testing**

**Faculty Leaders: Drs. Stephanie  
Davis, Lindsay Caverly and Margaret  
Rosenfeld**

“The Resident Boot Camp was amazing! I feel so much more confident (despite still being nervous) about starting fellowship. These topics were awesome; the faculty were great teachers. I had a lot of fun was glad to see people I had met on the interview trail”





# Hands on Workshops

## Pediatric Track

### **Line Placement and Chest Tubes**

**Faculty Leaders: Drs. Ryan Good  
and Erin Powell**

### **Extracorporeal Membrane Oxygenation (ECMO)**

**Faculty Leader: Jordan Rettig, MD**

"I enjoyed the Resident Boot Camp course. I gained a wealth of knowledge and made some new friends. I am glad I got to be a part of the Resident Boot Camp and look forward to working with the ATS in the future"



# Hands on Workshops

## Pediatric Track



### **Mechanical Ventilation**

**Faculty Leaders: Drs. Eric Zee and  
Christopher Baker**

### **Airway Clearance**

**Faculty Leaders: Drs. Michelle Trivedi  
and Ross Myers**

“The Resident Boot Camp was extremely useful in preparing for first year fellowship! The course improved my overall experience at ATS 2018 by setting up a framework for Pediatric Pulmonary. The course helped me navigate my personal strengths and needed areas for improvement within the Pediatric Pulmonary curriculum!”

# 2018 ATS Resident Boot Camp Faculty

## RESIDENT BOOT CAMP FACULTY

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Rosemary Adamson, MD  
Mark Adelman, MD  
Tyler Albert, MD  
Laura Crotty Alexander, MD\*  
Elizabeth Allen, MD  
Abdul Hamid Alraiyes, MD  
Anthony Andriotis, MD  
Casandra Arevalo-Marcano, MD  
Ren Ashton, MD  
Amy Atkeson, MD  
Jenelle Badulak, MD  
Saqib Baig, MD  
Christopher Baker, MD  
Cameron Baston, MD  
James Beck, MD  
Sarah Beesley, MD  
Dan Benscoter, MD  
Matthew Bernens, MD  
Anna Brady, MD  
John Brewington, MD  
Emily Brigham, MD  
Kristin Burkart, MD, MSc\*  
W. Graham Carlos, MD  
Lindsay Caverly, MD  
Neal Chaisson, MD  
Matt Champion, MD  
Subani Chandra, MD  
Lydia Chang, MD  
Colleen Channick, MD  
David Chu, MD  
Jonathan Chung, MD  
Brendan Clark, MD, MS\*  
Alison Clay, MD  
Ivan Co, MD  
Geoffrey Connors, MD (Chair, Adult)  
Talal Dahhan, MD  
Carolyn D'Ambrosio, MD  
Stephanie Davis, MD  
Emily DeBoer, MD  
Javier Diaz-Mendoza, MD  
Kathleen Doo, MD  
Mathew Drake, MD\*  
Adel El Boueiz, MD  
Oleg Epelbaum, MD  
Rania Esteitie, MD  
Saadia Faiz, MD  
Zachary Fulkerson, MD  
Guillermo Garrido, MD  
Garth Garrison, MD

Shekhar Ghamande, MD  
Zena Ghazala, MD  
Brenda Louise Giles, MD  
Antonio Gomez, MD  
Ryan Good, MD\*  
Andy Goodwin, MD  
Bridget Graney, MD  
Stephen Hawkins, MD  
Don Hayes, MD  
Heather Hoch, MD  
Ben Hughes, MD  
Tristan Huie, MD  
Jennifer Ingram, PhD\*  
Shazia Jamil, MD  
Meshell Johnson, MD  
Jessica Johnson, MD  
Viren Kaul, MD  
Jonathan Keller, MD  
Danai Khemasuwan, MD  
James Knepler, MD  
Maryl Kreider, MD  
Patricia Kritek, MD, EdM\*  
Rebecca Krochmal, MD  
Armin Krvavac, MD  
Phillip Lamberty, MD  
Anthony Lanfranco, MD  
Charles Lanks, MD  
May Lee, MD\*  
Barb Leverage, MD  
Deb Liptzin, MD (Chair, Peds)  
Andrew Luks, MD  
Kenneth Lyn-Kew, MD  
Patrick Lyons, MD  
Samir Makani, MD\*  
Hal Manning, MD  
Brenda Marsh, MD  
Stephanie Maximous, MD  
Jennifer McCallister, MD  
Rishi Mehta, MD  
Kathryn Melamed, MD  
Michael Mendez, MD  
Bart Moulton, MD  
Uma Munnur, MD  
Ross Myers, MD  
Faria Nasim, MD  
Anna Neumeier, MD  
Jaime Palomino, MD  
Trisha Parekh, MD  
Amit Parulekar, MD

Pujan Patel, MD  
Isabel Pedraza, MD\*  
Katie Pendleton, MD  
Jennifer Possick, MD  
Erin Powell, MD  
Navitha Ramesh, MD  
Meghan Ramsey, MD  
Gregory Ranches, MD  
Jordan Rettig, MD  
Jeremy Richards, MD  
Leslie Ridall, MD  
Carleen Risaliti, MD  
Kathryn Robinett, MD  
Jeff Robinson, MD  
Reza Ronaghi, MD  
Margaret Rosenfeld, MD  
Zeenat Safdar, MD  
Lekshmi Santhosh, MD  
Marc Schecter, MD  
Frank Schembri, MD  
Nitin Seam, MD  
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Michelle Sharp, MD  
Briana Short, MD  
Ahmed Shozab, MD  
Joshua Sill, MD  
Amik Sodhi, MD  
Morgan Soffler, MD  
George Solomon, MD  
Peter Sottile, MD  
Chantal Spencer, MD  
David Spielberg, MD  
Nick Stollenwerk, MD  
Dan Sweeney, MD  
Ignacio Tapia, MD  
Krittika Teerapunchaoen, MD  
James Town, MD  
Michelle Trivedi, MD  
Tisha Wang, MD  
Ian Weir, MD  
Natalie Yip, MD  
Michelle Yu, MD  
Eric Zee, MD  
Edith Zemanick, MD\* (Chair, Peds)

\* Indicates 2018 ATS Boot Camp Leadership



# 2018 Boot Camp Class



## CONGRATULATIONS TO THE 2018 BOOT CAMP CLASS!

Farrukh Abbas, MD  
Ahmed Abdelbasit, MD  
Dionne Adair, MD  
Muhammad Ali, MD  
Nancy Allen, MD  
Dagny Anderson, MD  
Juan Barron, MD  
Sarah Bauer, MD  
Moezullah Beg, MD  
Zubin Bham, MD  
Claudine Brown, MD  
Leigh Cagino, MD  
Mary Card, MD  
Carlos Cardenas, MD  
Hugo Carmona, MD  
Jason Carr, MD  
Sara Carson, MD  
Christian Castaneda, MD  
Christopher Chan, MD  
Jiwoon Chang, MD  
Catherine Charron, MD  
Kshitij Chatterjee, MD  
Rohini Chatterjee, MD  
Siddique Chaudhary, MD  
Mwelwa Chizinga, MD  
Junad Chowdhury, MD  
Naem Chowdhury, MD  
Adrienne Conger, MD  
Stephanie Cull, MD  
Amy Dettori, MD  
Kunwardeep Dhillon, MD  
Zachariah Dorey-Stein, MD  
Brittany Duchene, MD

Natasha Dudiki, MD  
Iheanacho Emeruwa, MD  
Toni-Denise Espina, MD  
Rania Farhat, MD  
Marlene Farinacci Vilaro, MD  
Ben Fernandes, MD  
Alexandra Filippi, MD  
Fran Flanagan, MD  
Christopher Fowler, MD  
Natalie Francis, MD  
Rodrigo Garcia, MD  
Alberto Goizueta, MD  
Suzanne Gouda, MD  
Himmat Grewal, MD  
Sigfus Gunnlaugsson, MD  
Sean Gunther Maher, MD  
Pallav Halani, MD  
Gena Han, MD  
Kelley Hill, MD  
Kelsey Hills-Evans, MD  
Jacqueline Hirsh, MD  
Andrew Holt, MD  
Abdurrahman Husain, MD  
Shaikh Muhammad Noor  
Husnain, MD  
Jennifer Im, MD  
Oki Ishikawa, MD  
Maki Ishizuka, MD  
Ria Itty, MD  
Stephanie Iusim, MD  
Yameena Jawed, MD  
Forrest Jespersen, MD  
Enambir Josan, MD

Lakshmi Kallur, MD  
Paul Kannarkatt, MD  
Adnanul Karim, MD  
Jacob Kaslow, MD  
Sai Katta, MD  
Amarpreet Kaur, MD  
Firas Khaims, MD  
Humnah Khudayar, MD  
Lisa Ha-Yeon Kim, MD  
Rashi Kochhar, MD  
Wiktorja Kowacz, MD  
Jennifer Krall, MD  
Shweta Kukrety, MD  
Trevor Lane, MD  
Stefi Lee, MD  
Patricia Lenhart-Pendergrass, MD  
Natalia Levytska, MD  
Hung-I Liao, MD  
Taylor Lincoln, MD  
Gilboa Lombardi, MD  
Megan Lowery, MD  
Precious Macauley, MD  
David MacDonald, MD  
Erica MacKenzie, MD  
Hafiz Mahboob, MD  
Neha Mehta, MD  
Kathleen Melville, MD  
Jennifer Milillo, MD  
Michael Miller, MD  
Christina Mingora, MD  
Jasleen Minhas, MD  
Abhinav Mittal, MD  
Ana Monteiro, MD

David Moreno McNeill, MD  
Christopher Morton, MD  
Joshua Motelow, MD  
Taylor Myers, MD  
Andrea Mytinger, MD  
Elitsa Nicolaou, MD  
Eduardo Nunez, MD  
Miguel Ortiz-Bonilla, MD  
Pooja Pandit, MD  
Rukma Parthvi, MD  
Osman Perez, MD  
Amina Pervaiz, MD  
Jarmil Peters, MD  
Tenzing Phanthok, MD  
Thomas Poore, MD  
Daniel Puebla Neira, MD  
Seema Qayum, MD  
Rachel Quaney, MD  
Griwan Rajbhandari, MD  
Priya Raman, MD  
Kruthika Reddy, MD  
Anne Reihman, MD  
Mariela Rivera, MD  
Jesus Rodriguez, MD  
Nina Salfity, MD  
Roger Samuels, MD  
Adam Schwartz, MD  
Amit Shah, MD  
Claire Shappell, MD  
Adetomiwa Shokunbi, MD  
Xin (Cissy) Si, MD  
Anna Silberman, MD  
Ankur Sinha, MD

Crystal Stanton, MD  
Jonathan Stoeve, MD  
Inga Friederike Strelow, MD  
Maria Sunseri, MD  
Kawanjit Surapur, MD  
David Swetland, MD  
Moussa Takla, MD  
Praful Tewari, MD  
Robert Varipapa, MD  
Steven Verga, MD  
Kadambari Vijaykumar, MD  
David Villafuerte, MD  
Nicholas Villalobos, MD  
Corbett Walsh, MD  
Krishnan Warrior, MD  
Kelly Wickstrom, MD  
Sarah Williams, MD  
John William, MD  
Benjamin Wisniewski, MD  
Molly Wolf, MD  
Fatima Wong, MD  
Clay Wu, MD  
Xilei Xu Chen, MD  
Philip Yang, MD  
Jenny Yang, MD  
Yaoli Yang, MD  
Maidah Yaqoob, MD  
Deena Yousif, MD  
Nadine Zahar, MD

# Virtual Boot Camp



ATS offered a Virtual Boot Camp course for those not selected or unable to attend the live course. The Virtual Boot Camp included daily live webinars, along with access to key resources and Facebook Live opportunities.

## Key Webinars:

- **Welcome to the Virtual RBC!**

This webinar discussed the highest yield topics to cover prior to beginning fellowship, and how to take advantage of the innumerable ATS offerings and tools. This live webinar format allowed for chatting amongst attendees and submitting any and all questions you can think of to both speakers and fellow virtual boot campers.

- **How to Succeed in PCC Fellowship**

This webinar discussed how to be the best fellow you can be, while maintaining your sanity and learning a lot. This live webinar format allows for chatting amongst attendees and submitting any and all questions you can think of to both speakers and fellow virtual boot campers.

**To view the 2018 Resident Boot Camp webinars,  
please visit: <http://www.thoracic.org/professionals/ats-webinars/>**

# Thank You

**This 2018 Resident Boot Camp  
was supported by in-kind grants from:**

Ambu  
AstraZeneca LP  
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Verathon



# ATS 2019 Resident Boot Camp

## AMERICAN THORACIC SOCIETY INTERNATIONAL CONFERENCE

May 17-May 22, 2019 | Dallas, Texas

[conference.thoracic.org](http://conference.thoracic.org)

dallas  
tx

If you or a colleague would like to attend the 2019 ATS Resident Boot Camp, which is scheduled for Friday, May 17 and Saturday, May 18, 2019, in Dallas Texas, please send an email to Lauren Lynch, ATS Staff the Boot Camp, at [bootcamp@thoracic.org](mailto:bootcamp@thoracic.org).

Registration will open in December 2018. If you are interested teaching at the 2018 ATS Resident Boot Camp course, please send an email to: [bootcamp@thoracic.org](mailto:bootcamp@thoracic.org)

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Photos by Steve Schneider



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AMERICAN THORACIC SOCIETY  
25 Broadway, 18th Floor, New York, NY 10004  
T. 212-315-8600 F. 212-315-6498  
[www.thoracic.org](http://www.thoracic.org)