

# RADIOLOGY™ TEACHES



***A MENTOR-MENTEE HANDBOOK***

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\*\*Please note that when available,  clickable external hyperlinks appear underlined and in blue font



# MISSION & VISION



## WHAT IS RADIOLOGY-TEACHES?

- Utilizing case vignettes, TEACHES integrates ACR Select clinical decision support to simulate the process of ordering imaging studies appropriately, safely and cost effectively
- Learners work through modules (pediatrics, OBGYN, surgery, to name a few) which bring to life a digital representation of the ACR Appropriateness Criteria for diagnostic imaging
- More information can be found here: [Video Introduction to Radiology-TEACHES](#)
- The dedicated TEACHES website can be accessed [here](#).
- A dashboard of TEACHES statistics and metrics can be accessed [here](#).

## WHY CREATE THIS HANDBOOK?

- There are several amazing guides regarding the authoring process and steps already in existence. However, this handbook incorporates all of these resources and provides the links all in one place so there's no digging through emails or searching various sites
- The goal of this handbook aims to outline the authoring and development steps in one easily accessible guide. Several of the handouts are available in various forms including on a google drive. This handbook aims to provide guidance and direction as these resources are accessed
- The goal of this handbook is also two fold and incorporates information regarding the budding Mentor-Mentee ACR Radiology-TEACHES (RT) group



# WHY IS A MENTOR-MENTEE GROUP NEEDED?

- Many medical students may not have access to radiologists at their programs or train at a medical school program without a radiology residency. Conversely, many hybrid practices which combine academics and private practice like style may have contact with residents, but less so with core rotating medical students
- Authoring high quality approved cases can be challenging for newly rotating medical students
- The TEACHES program hopes to facilitate a mentoring match allowing both mentor and mentee publishing credit

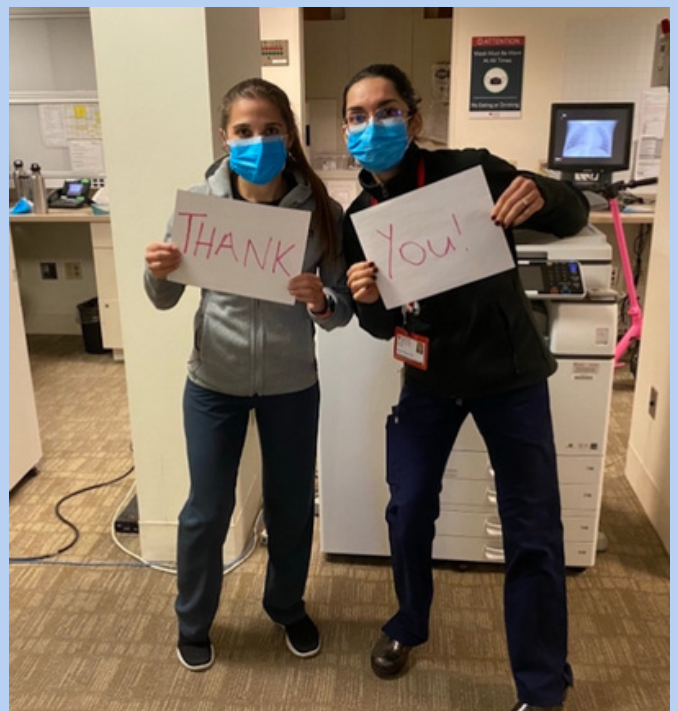
# WHY JOIN RADIOLOGY-TEACHES?

## AS A MENTEE

- Excellent initial exposure to radiology
- Learning radiology regardless of future desired specialty
- Forming a relationship with an actual radiologist (who has voluntarily signed up to dedicate their free time to mentoring!)
- Great review of anatomy
- Publish in a reasonable time frame
- Talking point during residency interviews
- Opportunity for potentially more radiology-related projects or future away clerkship!
- Learning the “authoring” process for inexperienced researchers
- Connecting with other medical students

## AS A MENTOR

- TEACHES is a much shorter time commitment and less labor intensive than say working with a trainee on an educational exhibit or research publication
- Network with other mentors from different institutions
- Build and develop effective mentoring and leadership skills
- Gain exposure to the workflow and ACR network



# MENTORING & MATCHING



## ROLES OF THE PARTIES

### ACR RADIOLOGY-TEACHES

- The Radiology-TEACHES mentorship team with support from ACR staff will guide and grow the mentoring program
- Match mentees to their mentors
- Offer guidance and resources
- Support case development and activities intended to successfully enhance the mentor-mentee pairing
- Recruit mentors and mentees from diverse backgrounds and underrepresented groups
- Identify mentor and mentee needs and objectives, promote a welcoming, non threatening, and inclusive environment
- Host mentorship events
- Ongoing assessment, maintenance and feedback of the program and its activities
- Strategies to support mentor-mentee effective relationships as well as analysis of strained or failed pairings

### MENTOR

- The mentor should be supportive, enthusiastic and accessible
- Act as a role model, actively listen, be compassionate and nonjudgmental
- Provide feedback on mentee ideas and questions
- Establish meeting frequency
- Guide the mentee in appropriate case selection
- When applicable or if mutually agreed other areas of mentorship may include:
  - Research
  - Career development
  - Work-life Balance & Wellness
  - Transitioning to new roles
  - Stress management
  - Financial management
  - Understanding ACR and pursuing leadership roles

### MENTEE

- The mentee should be open to feedback
- Respectful of the mentor's time
- Available and communicate in a timely manner
- Professional
- Active listener
- Communicate goals, aspirations, and motivations
- Responsible, show and take initiative

# AREAS OF FOCUS

## ACR RADIOLOGY-TEACHES

- The main area of focus will be case (*Educational and/or Advanced*) development to grow the TEACHES library and modules

## OTHER SUGGESTED OPTIONAL ACTIVITIES:

- Advising mentees about career options and opportunities
- Attendance at events together or ACR meetings
- Pursuing advocacy in ACR and leadership roles



# MATCHING

The Radiology-TEACHES mentoring team will facilitate the mentor pairing and matching. Matches are completed on a rolling basis. Mentor profiles will be available on our website and our Instagram pages (coming soon!). Most individuals will be matched as soon as we can, but if seeking a more specific mentor/mentee than it could take a bit longer to find the perfect fit. Matching will be based on different factors and mentors who have specialized skills or in subspecialty practice we will certainly try to accommodate those factors. Additional considerations include location and region. We will have rolling zoom orientations for groups of new mentors. The most recent recorded orientation can be found [here](#).

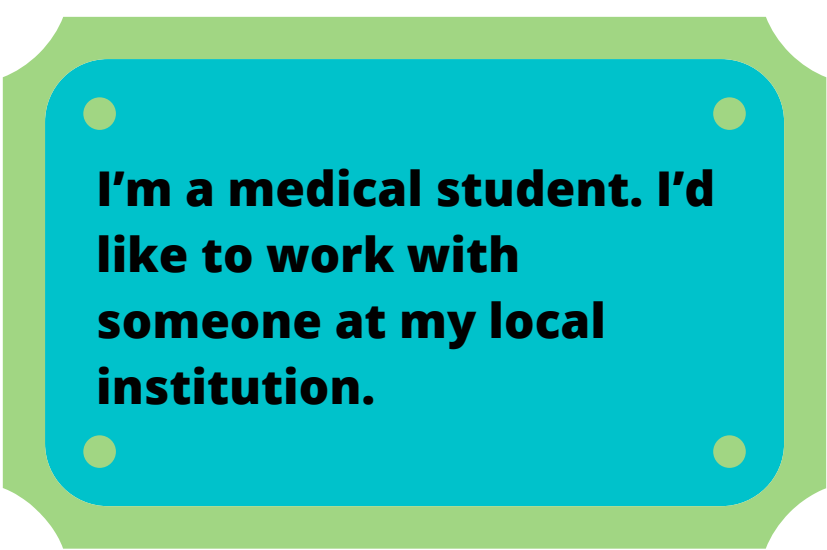
## WHICH STATEMENT BEST DESCRIBES YOU:

**I'm a medical student.**  
**I'd like to work with**  
**someone at my local**  
**institution.**

**I'm a medical student**  
**without access to a**  
**radiology department. I**  
**need assistance finding**  
**a mentor.**

**I'm a resident or fellow,**  
**interested in becoming**  
**a mentor.**

**I'm an attending,**  
**interested in becoming**  
**a mentor.**



**I'm a medical student. I'd like to work with someone at my local institution.**

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## MEDICAL STUDENT WITH MENTOR ALREADY

Already have a mentor in mind at your local institution? No problem! Make sure to register first to become an [author](#). On the intake form you can easily already indicate the preceptor/mentor and their email address. Information regarding case authoring and guides can be found on pages 17–23 of this manual.



**I'm a medical student without access to a radiology department. I need assistance finding a mentor.**

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## MEDICAL STUDENT WITHOUT MENTOR

We are delighted to assist in matching you with a mentor for case creation for Radiology-TEACHES. Please make sure to register to become an [author](#) and you can indicate that you *do not have* a preceptor.

You will receive an email notifying of your mentor match.

***Below is a helpful proposed checklist after the match:***

### **Set up the meeting**


- ☐ Take responsibility for setting up a meeting (zoom or phone call) with your mentor to set goals and expectations.
- ☐ It may be helpful to send your CV to your mentor or an "about me" paragraph

### **Preparing for the meeting**

- ☐ Familiarize yourself with the authoring content
- ☐ Decide on which you may prefer to author, an educational (basic) vs advanced case. Decision support can be found on **page 17**
- ☐ Prepare a list of questions for your mentor. Ask if they may have cases in their collection to utilize or if you will be responsible for finding images or cases
- ☐ Reflect and incorporate your needs and interests

### **First Meeting**

- ☐ Share your background
- ☐ Share goals, career and leadership aspirations
- ☐ Discuss to do items and realistic timeframes based on your schedule
- ☐ Set possible next meeting date
- ☐ Express appreciation/gratitude
- ☐ Recap your "homework/to do list"



**I'm a resident or fellow,  
interested in becoming  
a mentor.**

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## RESIDENT OR FELLOW MENTOR

Excellent! We are ecstatic to have residents and fellows be a part of the mentoring team. Many junior residents unnecessarily worry that he or she may not be qualified to mentor. However, this should not be the case. Residents, even R1 and R2, are in a perfect position to join and provide guidance. Intern year and early residency can best be described as “drinking out of a fire hydrant”. You may not have had a chance to truly stop and reflect about the vast amount of knowledge you have quickly accumulated and really do know since medical school. The cases can be a mix of those that do and do not require imaging.

If at any point during the mentoring process, you feel unqualified, unsure, or doubt your skills, please do not hesitate to reach out to us (particularly Dr. Lindsey Negrete, [lnegrete@stanford.edu](mailto:lnegrete@stanford.edu)) so we may better be able to address and meet your concerns

Mentoring [sign up](#) which should take only 5–10 minutes to complete the profile.

**I'm an attending,  
interested in becoming  
a mentor.**

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## ATTENDING MENTOR

Wonderful! We cannot wait for you to join our mentoring squad. Matching will be based on different factors and mentors who have specialized skills or subspecialty practice (IR or breast) we will certainly try to accommodate those factors.

Mentoring [sign up](#) which should take only 5–10 minutes to complete the profile.

### ***After the match, here is a helpful check list:***

- ☐ *Respond to the mentor's meeting request in a timely manner*
- ☐ *Consider the ways in which you are prepared to offer support. Think about your pre-existing commitments, limits and what space you have available or even unavailable*
- ☐ *Review mentee's CV, consider sharing yours or your brief bio too!*
- ☐ *Reflect on which goals you are comfortable with and can meet in a timely manner*
- ☐ *Offer alternative resources/contacts or guidance when unable to meet some goals*
- ☐ *Inquire about your mentee's own constraints (upcoming board exams or intensive rotations)*
- ☐ *Review and confirm commitments, consider a short interval check in*



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**Q: There is no residency program at my institution, can my mentee still benefit?**

A: Absolutely! There are certainly still benefits. For starters, mentors may be able to connect their mentee to colleagues or acquaintances at former programs or institutions they have trained. Additionally, we hope to have group events (virtual or in person) in which mentees could benefit from meeting each other as well the other mentors in the group.

**Q: My training and position is very specialized, can I still be a mentor (i.e I only do breast or IR)?**

A: Not a problem. Feel free to create content for any appropriateness criteria particularly when applicable to your area of expertise. Other areas of consideration include incorporation of health equity and patient-and family-centered care.

**Q: I'm only a junior resident, can I still serve as a mentor ?**

A: YES! YES! YES! As a junior resident, you are in a perfect position to guide a medical student in case development. To a medical student, residents have the power to serve as a very relatable role model. Do not let imposter syndrome creep in! Though you are still in training, you have learned so much knowledge that is invaluable to share. Being a mentor can be highly rewarding. Having a mentor has been shown to enhance motivation as well as productivity and potentially curbside burn out.





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## **Q: Are there deadlines?**

There are no firm deadlines. A sample projected timeline can be found on page 23.

Matches are on a rolling basis and will typically take approximately 1–2 weeks. We then advise mentor and mentees to find a convenient time to have a first meeting, preferably within 1–2 weeks. We estimate that from start to final submission approximately 1–3 months to allow for mentor–mentee work and family commitments and scattered holidays.

Advanced cases, as later described, will need to have a corresponding ACR Case in Point. To find a case in point case that best matches your topic, an organized list will soon be available (link coming soon). Mentees will be asked to reserve or hold a Case in Point (reservation system link coming soon) for a max of 60 days.

## **Q: Can I switch mentors after completing a case?**

We will try our best to accommodate this request. We would like to make sure a medical student who is in need of a mentor gets matched in a timely manner. We hope and anticipate the program will grow so mentees will not have to wait too long to receive at least their first match.



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## **Q: Can mentors/mentees switch if the initial match is not a good fit?**

A major goal of the program is to help manage strained or failed mentor-mentee relationships and learn from the factors contributing to these scenarios. We certainly will allow mentees or mentors to change without judgment or repercussions.

## **Q: How many mentees will I be assigned? What is the time commitment as a mentor?**

The number of mentees assigned will depend on your preferences and the number of cases you feel you can manage. It will also depend on your interest to engage with the mentee on topics not related to authoring cases. As both mentors and mentees become familiar with case development and execution, the time commitment may be reduced over time. We anticipate approximately 4 hours per month for a mentor. This commitment is significantly decreased from other such entities such as submitting abstracts or putting together conference abstracts with trainees.

## **Q: What is the time commitment as a mentee?**

We understand mentees are busy too. On top of juggling clinical rotations, studying for board exams, staying healthy, familial duties, there are another hundred things on your todo list. Similar to the mentor time commitment, we anticipate 4-6 hours per month.



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## **Q: Does my mentor have to be an ACR member ?**

Mentors do not have to be an ACR member to participate. ACR membership is free however for trainees including medical students and residents/fellows.

ACR Case in Point provides access to their archives to medical students. For the most recent and newest topics, ACR provides complementary membership for medical students. Access to Case in point will be imperative for the Advanced type content cases.

## **Q: How do I find Radiology-TEACHES on social media?**

Please follow us on Instagram! We hope to post mentors and their bios as they register with the program. We'd love to also post about the mentor/mentee combos and their stories and journeys together.



# **FUTURE GOALS OF THE MENTORING PROGRAM**

**(IN NO PARTICULAR ORDER)**



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## **1 23 BY 2023**

23 by 2023 is our initiative to have 23 mentor/mentee pair cases by the year 2023.

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## **2 VIRTUAL HAPPY HOURS AND EVENTS, MENTOR/MENTEE CASE TRIVIA NIGHTS**

open to other suggestions and ideas (please email Dr. Negrete, [Lnegrete@stanford.edu](mailto:Lnegrete@stanford.edu))

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## **3 IN PERSON EVENTS AT FUTURE MEETINGS**

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## **4 CASE AWARDS**

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## **5 OPPORTUNITIES FOR LEADERSHIP WITHIN THE MENTORING GROUP**



# AUTHORING

- Register first to become an [author](#)
- Medical students can also become an ACR member for free. Register [here](#).
- General Author Information
  - The TEACHES educational portal and the organized modules to learn can be found [here](#). (username and password required)
  - A walkthrough video of the Radiology-TEACHES program can be found [here](#).
  - The TEACHES authoring portal can be accessed [here](#).
  - Navigating the authoring portal [powerpoint/pdf](#).
  - Authoring FAQ [document](#)

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## Case Types

- You can choose to author *two very different types of cases* (educational/basic or advanced).
- To determine which case type might be a good fit for you and to get started, identify the statement which best applies to you, your interests, and your goals:

“I want to find out if radiology is a good field for me!”

**EDUCATIONAL/BASIC**

“I’m interested in another non-radiology specialty, but always wanted to learn more about radiology and appropriate ordering.”

“I want a deeper understanding of the anatomy and imaging findings and may be pursuing radiology for my future.”

**ADVANCED**

# EDUCATIONAL/BASIC

## AUTHORING

- Educational cases are the core of Radiology-TEACHES
- The foundation is rooted in appropriate imaging
- *No images are required*
- A current case list of topics can be found [here](#)

Possible steps in the educational/basic authoring process

- The first step is to look at the [current list](#) and find topics not yet created
- Consider common themes you often come across during clerkship, also rely on help from your mentor for inspiration and ideas
- Patient permission is not required (but please be mindful of removing all PHI and identifying information)

- In the portal, select Create a case -- > Educational
- The ACR Selection Question is the cornerstone of the program
- Click Search ACR
- ACR select will open in a new tab
- Select patient age and sex
- Click skip service
- Enter keyword to search for the indication
- Select the appropriate indication using the radio buttons
- An ACR table will display
- Select the service button associated with the highest appropriateness criteria (top option)

# EDUCATIONAL/BASIC

## AUTHORING

- Copy the decision support number
- Paste the decision support number on the case form (also keep the check mark for “display chart with all explanations”)
- Multiple choice stems, such as:
  - Which of the following is the most appropriate imaging option for this patient?
- Choices and explanations - can also include hyperlinks which open to new windows in the explanations
- Other style and editorial [guide](#)
- Case [examples](#)
- Potential ideas for inspiration not likely yet utilized can be found [here](#).

# ADVANCED AUTHORIZING

- Advanced cases are the newest addition to Radiology-TEACHES.
  - The goal is to incorporate images as well as anatomy.
  - Each advanced case is focused to incorporate ACR's image rich database and renowned online program called [Case in Point](#)
  - Case in Point is home to a very large database of award-winning cases that continues to grow daily.
  - A current complete list of Radiology-TEACHES cases can be found [here](#)
  - An Advanced TEACHES case [example](#)
  - Case in Point ([search archive](#))
  - The ACR Radiology-TEACHES staff is working hard to identify suitable Case in Point topics to be linked with the Advanced style cases (file coming soon)
  - Coming soon: reservation system to hold a desired Case in Point for 60 days that is desired for linking with your advanced case
- Possible steps in the educational/basic authoring process
  - The first step is to look at the current list and find topics not yet created
  - Advanced cases can have images
  - Consider common themes you often come across during clerkship, also rely on help from your mentor for inspiration and ideas
  - Patient permission is not required (but please be mindful of removing all PHI and identifying information)
  - Create a case – >Advanced content



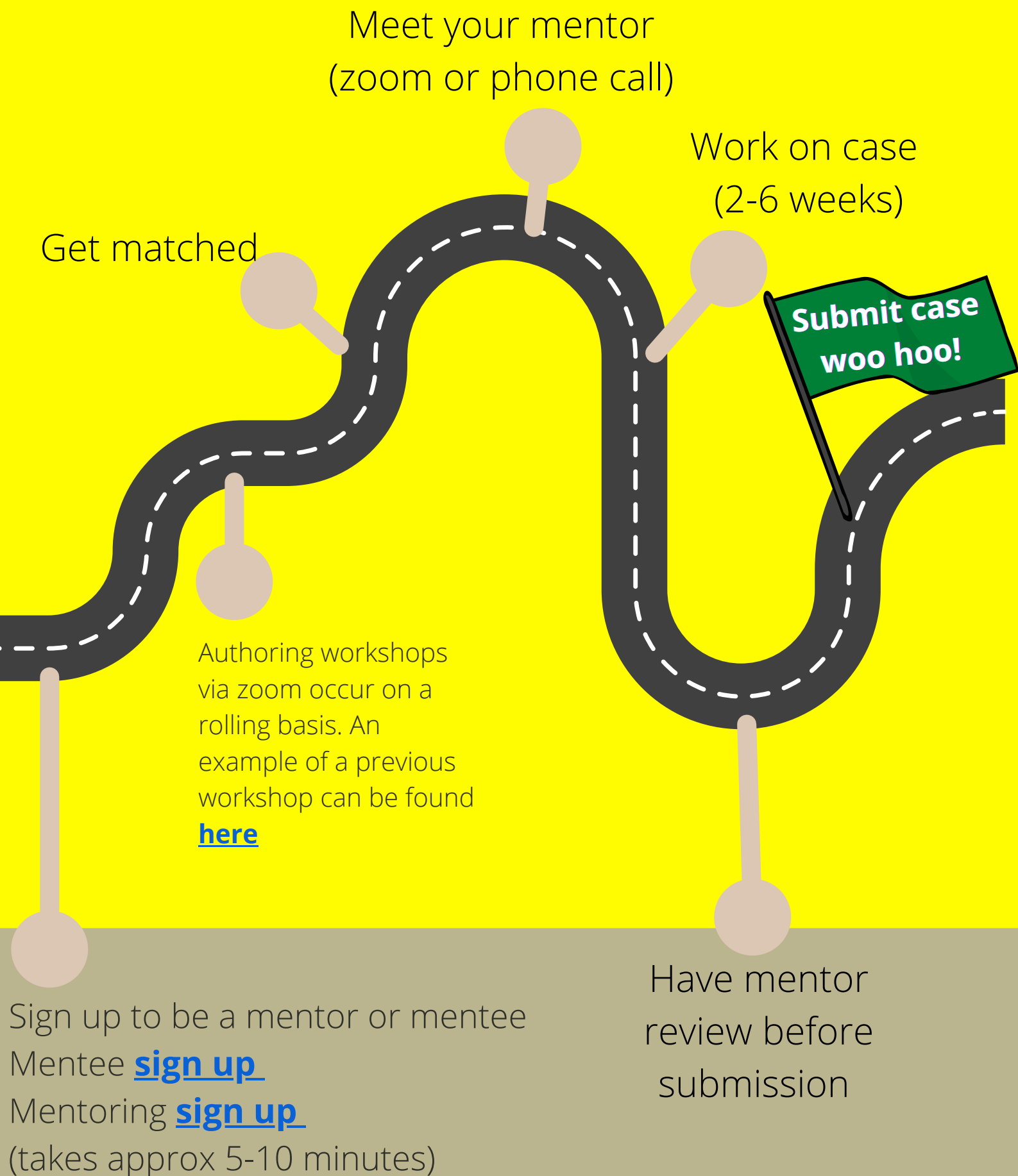
# ADVANCED AUTHORIZING

- The ACR Selection Question is the cornerstone of the program
- Click Search ACR
- ACR select will open in a new tab
- Select patient age and sex
- Click skip service
- Enter keyword to search for the indication (such as headache, chest pain, fall)
- Select the appropriate indication using the radio buttons
- An ACR table will display
- Select the service button associated with the highest appropriateness criteria (top option)
- Copy the decision support number
- Paste the decision support number on the case form (also keep the check mark for “display chart with all explanations”)
- Multiple choice stems, such as:
  - Which of the following is the most appropriate imaging option for this patient?
- Choices and explanations - can also include hyperlinks which open to new windows in the explanations
- Other style and editorial guidance can be found in this [guide](#)
- Advanced case [example](#)
- Other advanced imaging ideas ([document](#))

# AUTHORING POINTS OF CLARIFICATION

- ACR membership: For mentors and mentees in the TEACHES mentor group, membership is not required but preferred. Residents automatically receive member-in-training as well as those medical students that request it. Medical students are not required to be members to author cases.
- If ACR select does not have a matching support case ID, look online for ACR Appropriateness Criteria (AC Panel). This can be linked instead. Please contact Michele Huneke for linking.
- For advanced content: Case in Point cases have to be linked. The case does not have to match exactly. For example, a potential complication of a misplaced line or tube is a pneumothorax. A case with a pneumothorax could be linked. Discuss with your mentor or reach out to the TEACHES team for guidance or suggestions when needed.

# AUTHORING PROPOSED TIMELINE



# MEET THE TEAM

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## DR. LINDSEY NEGRETE

Dr. Negrete is a clinical instructor in Body imaging for the Department of Radiology at Stanford University. She is the founder of the Apple and Spotify audio and video podcast “Let’s Read Out! A Radiology Podcast”. Her passion for teaching first started when she was a biology laboratory instructor as a Stanford undergraduate student for which she earned her very first teaching award. At Stanford, she is the clerkship director for the core and advanced body imaging rotations. Her leadership also includes a role mentoring undergraduate students in the Stanford Immersion in Medicine Series (SIMS), a program actually developed by Dr. Negrete’s aunt in the Stanford Career Development Center. Dr. Negrete was first a SIMS shadowing mentee herself as a Stanford undergraduate student and now proudly serves as one of the physician mentors. She loves to find new and innovative ways to teach as she grows as an attending physician. Dr. Negrete is looking forward to leading the development and growth of the Radiology-TEACHES mentoring group.

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## DR. ANDREW NGUYEN

Dr. Nguyen is about to begin his internship at the University of Kentucky in Bowling Green. He will then proceed to be a diagnostic radiology resident at the University of Arizona. Up until his third year of medical school, he was interested in pursuing internal medicine until he discovered radiology during a clinical rotation. From there, he found mentorship with Dr. Negrete and, through her, was able to dive into research projects, assist with her podcast, and ultimately solidify his choice to become a diagnostic radiologist. One of his first ever publications was through Radiology-TEACHES, and today he is honored to help contribute to the growth of the program, while also offering his insight as a recently matched resident.

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## DR. MARC WILLIS

Dr. Willis is the Associate Chair of Quality Improvement for the Department of Radiology at Stanford University. His interest in safety and high reliability began through his work with the aviation community as a U.S. Navy flight surgeon. He leverages this experience with his passion for quality improvement and teaching across the continuum of medical education to create innovative educational strategies and learning environments. He founded Radiology-TEACHES (Technology Enhanced Appropriateness Criteria Home for Education Simulation) in 2013 in collaboration with the American College of Radiology and National Decision Support Company, the program was recognized as a 2017 Teaching Value Innovator in the Creating Value Challenge by Costs of Care, the ABIM Foundation, and their partners (The Leapfrog Group, Association of American Medical Colleges, and American Hospital Association).



# MEET THE TEAM

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## MICHELE HUNEKE, MT (ASCP)

Michele has been with the American college of Radiology for over 8 years and is currently the Director of Education Innovation. She is actively involved in projects ranging from radiology educational materials, medical student education such as Radiology-TEACHES and the medical student Escape Room and radiology simulations to help fulfill the core purpose of the ACR – to serve patients and society by empowering members to advance the practice, science and professions of radiological care.

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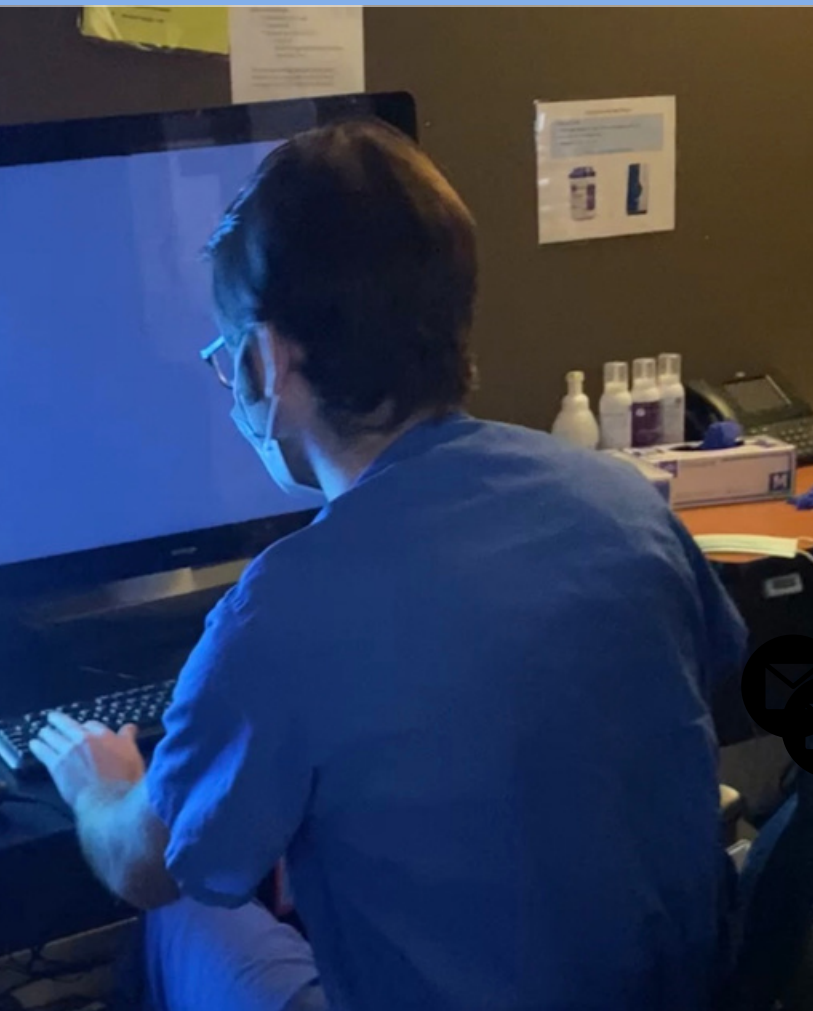
*Thank  
you!*

A big thank you to all of the wonderful contributions in this manual from Dr. Willis, Dr. Nguyen, and Michele Huneke. If you have any questions, comments or concerns, please do not hesitate to reach out. If you have ideas for future handbook versions, please contact Dr. Lindsey Negrete ([Lnegrete@stanford.edu](mailto:Lnegrete@stanford.edu)).

# Index of Materials

Material	Hyperlink
Video Introduction to Radiology-TEACHES	<a href="#">Video link</a>
ACR Radiology-TEACHES Website	<a href="#">Website</a>
ACR Radiology-TEACHES User Dashboard	<a href="#">Dashboard</a>
Mentor Recorded Orientation	<a href="#">Video</a>
Student author registration	<a href="#">Registration Form</a>
Mentor Sign up	<a href="#">Mentor Registration Form</a>
ACR Member In Training Sign Up	<a href="#">Register for free here</a>
Walkthrough video of TEACHES	<a href="#">Additional Video</a>
TEACHES Authoring Portal	<a href="#">Portal</a>
Navigating the Author Portal	<a href="#">PDF</a>
Authoring FAQ	<a href="#">Document</a>
Completed Case List	<a href="#">Case List</a>
Author Style and Editorial Guide	<a href="#">Guide</a>
Educational Example	<a href="#">Case Example</a>
Potential Topics In Need	<a href="#">Educational topics</a>
ACR Case in Point	<a href="#">Case in Point</a>
Advanced Case Example	<a href="#">Case Example</a>
Case in Point Archive	<a href="#">Archive</a>
Advanced Ideas	<a href="#">Ideas</a>
Authoring Workshop	<a href="#">Workshop Video</a>

# RADIOLOGY™ TEACHES



## CONTACT US

For questions about the Radiology-TEACHES program, contact [radiologyteaches@acr.org](mailto:radiologyteaches@acr.org)  
For help with technical issues, email [cortexsupport@acr.org](mailto:cortexsupport@acr.org).



EMAIL  
[RADIOLOGYTEACHES@ACR.ORG](mailto:RADIOLOGYTEACHES@ACR.ORG)



INSTAGRAM

