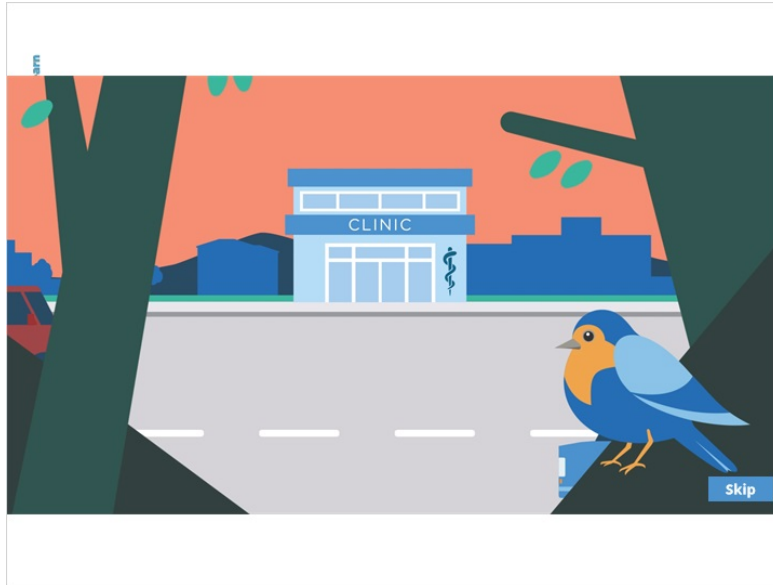


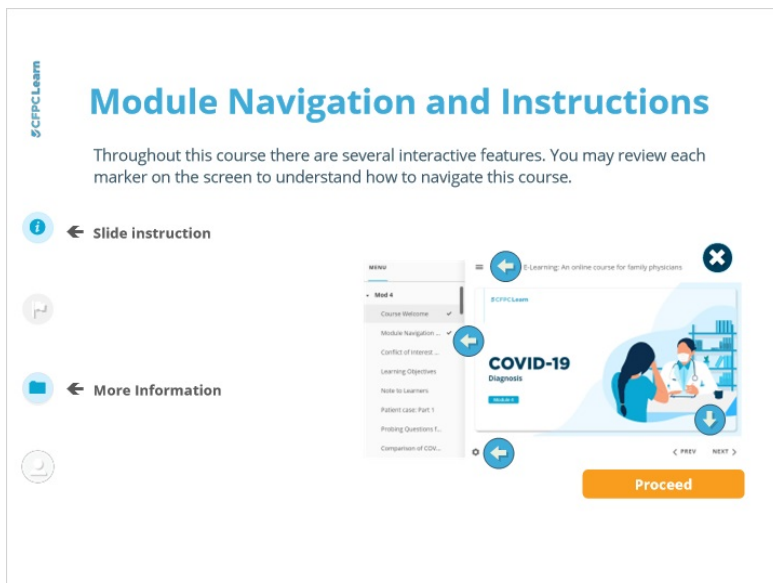
Case 29_Michelle Reblok

1. Conflicts

1.1 Intro Video



1.2 Module Navigation and Instructions



1.3 Learning Objectives

CFPC Learn

Learning Objectives

At the end of this module participants should be able to:

1. Identify key factors/findings in family medicine to help establish common clinical diagnoses.
2. Evaluate best evidence/guidance and practice tools to determine preferred treatment options for patients.
3. Synthesize patient preference, evidence and experience to formulate comprehensive plans for patient cases.

Approximately 15 minutes to complete each patient case.

Proceed

2. Michele Reblok

2.1 Meet Michelle Reblok

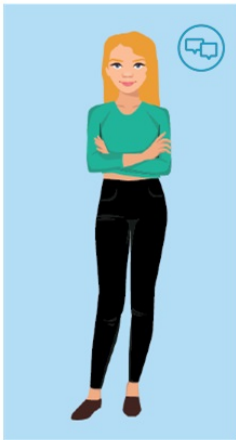
CFPC Learn

Michelle Reblok

Michelle Reblok, 25 years old, comes into your office today.

Michelle Symptoms Family History

What do you think?



Family History (Slide Layer)

The screenshot shows a digital story interface for a character named Michelle Reblok. On the left, there is a vertical sidebar with the 'SCFFClearn' logo at the top and four circular navigation icons: a question mark, a refresh symbol, a square, and a speech bubble. The main content area features the name 'Michelle Reblok' in blue. Below it is a light blue box with a close button 'X' in the top right corner, containing the text: 'Family History', 'Michelle's mother has Crohn's disease.', and 'Her sister has hyperthyroidism.'. At the bottom of the main area are three dark blue buttons labeled 'Michelle', 'Symptoms', and 'Family History', with the 'Family History' button being the active one. Below these buttons is an orange button that says 'What do you think?'. On the right side of the slide, there is a vertical panel with a light blue background, featuring a cartoon illustration of a woman with long blonde hair, wearing a green long-sleeved shirt and black leggings, with her arms crossed. A speech bubble icon is located in the top right corner of this panel.

Symptoms (Slide Layer)

The screenshot shows the same digital story interface as above, but with the 'Symptoms' slide layer active. The main content area now displays the text: 'Symptoms', 'When not feeling well, Michelle's bowel movements change from 1 to 5 urgent bowel movements per day.', and 'She also may go 2-3 days without bowel movements. Her symptoms seem to be worse during her university exams.'. The 'Symptoms' button in the bottom navigation bar is now the active one, highlighted in a darker shade of blue. The rest of the interface, including the sidebar, the character's name, and the right-side panel with the character illustration, remains the same as in the previous slide.

Michelle (Slide Layer)



SCFPCLearn

Michelle Reblok

Michelle
"Hi doctor, it's good to see you. I've been having stomach pain and diarrhea that comes and goes. Both can last for weeks."

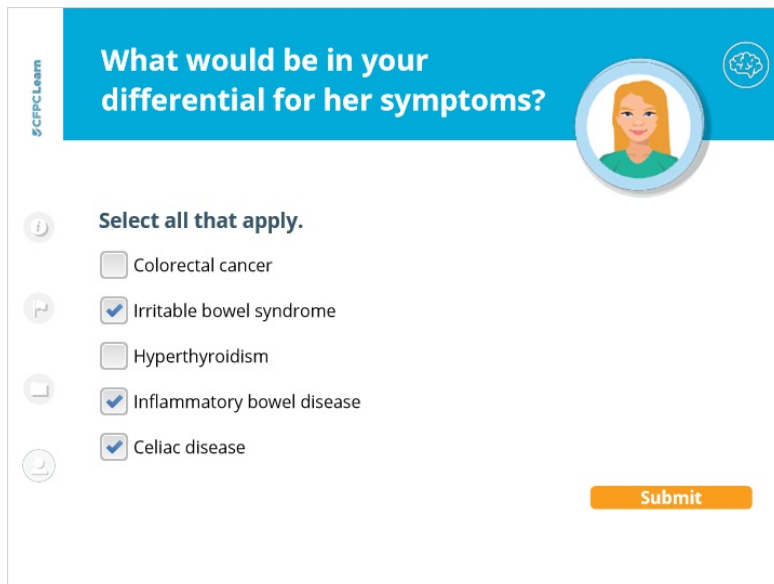
Michelle Symptoms Family History

What do you think?

The slide layer features a vertical sidebar on the left with icons for information, navigation, and a close button. The main content area includes a patient name, a quote, and three tabs. A full-body illustration of a woman with orange hair is on the right.

2.2 Question

(Multiple Response, 10 points, 1 attempt permitted)



SCFPCLearn

What would be in your differential for her symptoms?

Select all that apply.

- Colorectal cancer
- Irritable bowel syndrome
- Hyperthyroidism
- Inflammatory bowel disease
- Celiac disease


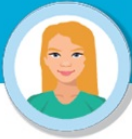
Submit

The question slide has a blue header with the question text and a circular profile picture of Michelle. The sidebar on the left is identical to the slide layer above. The question is a multiple-choice type with a 'Submit' button at the bottom right.

2.3 Michelle Reblok

CFPCLearn

Michelle Reblok



Answer: The correct answers are: celiac disease, irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD).

Celiac, IBS, IBD

Other Options


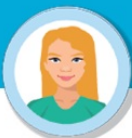
Click on the other tests to reveal more information about Dixie.

Moving Forward

Other Options (Slide Layer)

CFPCLearn

Michelle Reblok



Answer: The correct answers are: celiac disease, irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD).

Celiac, IBS, IBD

Other Options

Other Options

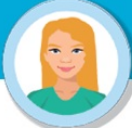
- Approximately 90% of colorectal cancer occurs in patients over 50 years old (median age: 66 years). It is even more unlikely if there is no family history consistent with Lynch Syndrome or familial adenomatous polyposis.
- Hyperthyroidism presenting as only GI symptoms is uncommon.

Moving Forward

Celiac (Slide Layer)

SCFPCLearn

Michelle Reblok



Answer: The correct answers are: celiac disease, irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD).

Celiac, IBS, IBD

Other Options

Disease	Prevalence	Typical age of diagnosis	Sex	Risk if family history present
IBS	~10%	18-34 years	Female, mostly	Increases by variable amount
Celiac	~1%	Variable	Relatively equal	~7-10% for siblings and offspring
IBD	0.7%	Bimodal peak: 20's, 50's	Relatively equal	5-10%: greater influence in Crohn's disease than ulcerative colitis

2.4 Meet Lamis Abad

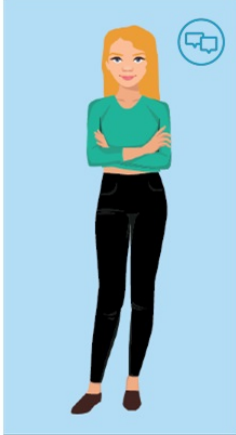
SCFPCLearn

Michelle Reblok

You ask Michelle to further elaborate on her symptoms.

Michelle **You** **Michelle Responds**

What do you think?



Michelle Responds (Slide Layer)

Michelle Reblok

Michelle Responds
"Well, I'm generally a poor sleeper. But once I am asleep, I don't notice the stomach pain."

Michelle You Michelle Responds

What do you think?

You (Slide Layer)

Michelle Reblok

You
"Does the pain ever wake you up from sleeping?"

Michelle You Michelle Responds

What do you think?

Michelle (Slide Layer)


SCFPCLearn

Michelle Reblok

Michelle
"My stomach troubles have been going on for two years, at least. The pain seems to improve after I go to the bathroom. I am also really bloated."

Michelle **You** **Michelle Responds**

What do you think?

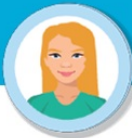


2.5 Question

(Multiple Response, 10 points, 1 attempt permitted)

SCFPCLearn

Which of Michelle's symptoms are consistent with irritable bowel syndrome?



Select all that apply.


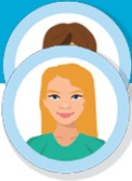
- Pain is associated with defecation
- Altered bowel habits
- Absence of alarm symptoms (weight loss, nocturnal symptoms, rectal bleeding)
- All of the above
- Length of time symptoms have been present

Submit

2.6 Question Review

CFPCLearn

Review



Answer: All of the above

Diagnostic criteria for IBS:


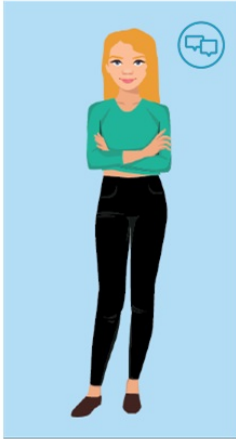
- Chronic abdominal pain (> 6 months)
- Related/associated with defecation or altered bowel habits
- Bloating
- Absence of alarm features

Proceed

2.7 Michelle Reblok

CFPCLearn

Michelle Reblok



You have a few more questions for Michelle.

You Michelle Physical Exam

What do you think?

Family History (Slide Layer)

The screenshot shows a slide layer titled "Michelle Reblok" with the SCFFClearn logo in the top left. A vertical sidebar on the left contains navigation icons: a question mark, a refresh icon, a close icon, and a back icon. The main content area displays the text: "Family History", "Michelle's mother has Crohn's disease.", and "Her sister has hyperthyroidism." Below this text are three buttons: "You", "Michelle", and "Physical Exam". At the bottom right of the text area is a yellow button that says "What do you think?". On the right side of the slide, there is a vertical blue panel featuring a cartoon illustration of a woman with blonde hair, wearing a green long-sleeved shirt and black pants, with her arms crossed. A speech bubble icon is located in the top right corner of this panel.

Physical Exam (Slide Layer)

The screenshot shows a slide layer titled "Michelle Reblok" with the SCFFClearn logo in the top left. A vertical sidebar on the left contains navigation icons: a question mark, a refresh icon, a close icon, and a back icon. The main content area displays the text: "Physical Exam (Objective):", "• Healthy looking female", "• Height: 170 cm, weight: 65 kg (no change), BMI=22", and "• Abdominal exam: generalized tenderness; no guarding, rebound or masses felt". Below this text are three buttons: "You", "Michelle", and "Physical Exam". At the bottom right of the text area is a yellow button that says "What do you think?". On the right side of the slide, there is a vertical blue panel featuring a cartoon illustration of a woman with blonde hair, wearing a green long-sleeved shirt and black pants, with her arms crossed. A speech bubble icon is located in the top right corner of this panel.

Michelle (Slide Layer)

SCFFClearn

Michelle Reblok

Michelle
"I don't think so."

You Michelle Physical Exam

What do you think?

You (Slide Layer)

SCFFClearn

Michelle Reblok

You
"Michelle, have you noticed any weight loss or bleeding when you have a bowel movement?"

You Michelle Physical Exam

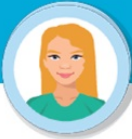
What do you think?

2.8 Question

(Multiple Response, 10 points, 1 attempt permitted)

SCFPCLearn

What test would you NOT consider ordering at this time?



Select all that apply.


- Complete blood count
- C-reactive protein
- Fecal calprotectin
- Colonoscopy
- Anti-tissue transglutaminase (ATTG)

Submit

2.9 Answer review

SCFPCLearn

Michelle Reblok



Answer: Colonoscopy would not be considered at this time.

- Colonoscopy
- ATTG
- C-Reactive Protein
- Fecal Calprotectin



Click on the other tests to reveal more information about Dixie.

Moving Forward

Fecal Calprotectin (Slide Layer)

SCFPCLearn

Michelle Reblok



Answer: Colonoscopy would not be considered at this time.

- Colonoscopy
- ATTG
- C-Reactive Protein
- Fecal Calprotectin**

Fecal Calprotectin (FCP)

FCP may be:

- Elevated in patients with inflammatory bowel disease (IBD).
- Normal in patients with irritable bowel syndrome.
- FCP < 100ug/g: helps rule out IBD
- FCP > 250ug/g: increased likelihood of IBD



More information about FCP on next slide.

Moving Forward

C-Reactive Protein (Slide Layer)

SCFPCLearn

Michelle Reblok



Answer: Colonoscopy would not be considered at this time.

- Colonoscopy
- ATTG
- C-Reactive Protein**
- Fecal Calprotectin

C-Reactive Protein (CRP)



CRP is a general inflammatory marker. While not specific, a negative (i.e., normal) result will reassure that the condition is unlikely inflammatory.

Moving Forward

ATTG (Slide Layer)

SCFPCLearn

Michelle Reblok



Answer: Colonoscopy would not be considered at this time.

- Colonoscopy
- ATTG
- C-Reactive Protein
- Fecal Calprotectin



Anti-tissue Transglutaminase (ATTG)
Ordering ATTG is reasonable as celiac disease is approximately three times more common in patients with IBS symptoms.

Moving Forward

Colonoscopy (Slide Layer)

SCFPCLearn

Michelle Reblok



Answer: Colonoscopy would not be considered at this time.

- Colonoscopy
- ATTG
- C-Reactive Protein
- Fecal Calprotectin


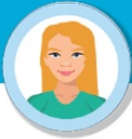
Colonoscopy
Testing in young people without alarm features: minimal likelihood of organic findings.
A large primary care cohort of ~6000 patients with undifferentiated disease at 6 months found the diagnosis was irritable bowel syndrome for 32% and irritable bowel disease for 3.5%.

Moving Forward

2.10 Question Review

CFPCLearn

Fecal Calprotectin



Interpretation

Fecal Calprotectin and Likelihood Ratios


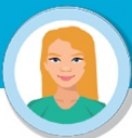
- A **lower negative likelihood ratio** (closer to 0) indicates a lower chance of disease when the test is negative. An FCP less than 50, and even less than 100, is reassuring to help rule-out inflammatory bowel disease (IBD).
- A **higher positive likelihood ratio** (i.e., the greater it is away from 1) indicates a higher chance of disease when the test is positive. FCP values over 200 are helpful in suggesting the presence of IBD.

Likelihood Ratios Moving Forward

Likelihood Ratios (Slide Layer)

CFPCLearn

Fecal Calprotectin



Interpretation

FCP Result (ug/g)	Sensitivity	Specificity	Likelihood ratio: Positive	Likelihood ratio: Negative
50	93	62	2.4	0.1
100	86	77	3.7	0.2
250	62	90	6.2	0.4

Likelihood Ratios Moving Forward

2.11 Michelle Reblok

This screenshot shows a virtual patient interaction interface. On the left, a vertical sidebar contains the text "#CFPCLearn" and four circular icons. The main area features the name "Michelle Reblok" in blue. Below the name is a light blue box with the text "You share a tentative diagnosis with Michelle." At the bottom of this area are two dark blue buttons labeled "You" and "Michelle", and an orange button labeled "What do you think?". On the right, a vertical panel shows a cartoon illustration of a woman with long blonde hair, wearing a green top and black pants, with her arms crossed. A speech bubble icon is in the top right corner of this panel.

Michelle (Slide Layer)

This screenshot shows the same virtual patient interaction interface as above, but with a slide layer open. The slide layer is a light orange speech bubble containing the text: "Michelle", "I read about that online ... and some scary ones too. I hope you are testing for those?", "Is there anything to do in the meantime?", and "This sucks." The slide layer has a small "x" icon in its top right corner. The "You" and "Michelle" buttons are now positioned below the slide layer, and the "What do you think?" button remains at the bottom.

You (Slide Layer)

The screenshot shows a slide titled "Michelle Reblok" from the SCFPCLearn course. On the left is a vertical toolbar with icons for help, navigation, and a clock. A large yellow speech bubble contains the text: "You: 'Michelle, I am thinking this may be irritable bowel syndrome. We will need to order a few tests to be more sure.'" Below the speech bubble are two buttons labeled "You" and "Michelle". At the bottom right of the slide is a button labeled "What do you think?". On the right side of the slide is a full-body illustration of a woman with blonde hair, wearing a green long-sleeved shirt and black pants, with her arms crossed. A speech bubble icon is positioned above her head.

2.12 Question



(Multiple Response, 10 points, 1 attempt permitted)

The screenshot shows a question slide titled "What would you consider for her initial treatment(s)?" from the SCFPCLearn course. The title bar is blue and includes a circular profile picture of the blonde woman from the previous slide. Below the title is a vertical toolbar with icons for help, navigation, and a clock. The question text is "Select all that apply." followed by five options, each with a checkbox: "Dietary fibre", "Low FODMAP Diet", "Education about IBS and reassurance", "All of the above", and "Education, reassurance and low FODMAP diet only". The "All of the above" option is selected. At the bottom right is a "Submit" button.

2.13 Review answer

CFPCLearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2


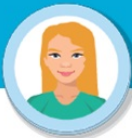
Click on the other tests to reveal more information about Dixie.

Moving Forward

Low FODMAP Diet - Contd (Slide Layer)

CFPCLearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2

Low FODMAP Diets (Continued)



- FODMAPs was ranked first in overall improvement, pain and bloating. It was effective primarily for diarrhea-subtype IBS.
- This review had limitations: short studies (mostly less than 4 weeks duration), none in primary care, risk of publication bias.

Moving Forward

Low FODMAP Diet (Slide Layer)

SCFFClearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2

Low FODMAP Diets

In a systematic review (13 randomized controlled trials, 944 patients), the low FODMAP diet was superior to other IBS diets (e.g., British Dietary Advice/NICE diet) or habitual diets.

Moving Forward

Dietary Fibre - Contd (Slide Layer)

SCFFClearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2

Dietary Fibre (Continued)



In a primary care randomized trial comparing psyllium, bran or placebo for 12 weeks, "adequate pain relief" was more likely with psyllium early and bran later.

Moving Forward

Dietary Fibre (Slide Layer)

SCFFClearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2

Dietary Fibre

In a primary care randomized trial comparing psyllium, bran or placebo for 12 weeks, "adequate pain relief" was more likely with psyllium early and bran later.

Moving Forward

Education (Slide Layer)

SCFFClearn

Michelle Reblok



Answer: All of the above.

- Education
- Dietary Fibre
- Dietary Fibre (Continued)
- Low FODMAP Diet #1
- Low FODMAP Diet #2

Education



Providing education on a patient's condition and reassurance is almost always reasonable.

Moving Forward

2.14 Let's Make a Plan

CFPCLearn

Let's Make a Plan



Write down some points related to a plan for Michelle. It can include the following: lifestyle or prescription intervention(s), lab(s)/test(s) required, follow up appointment, and referrals required.



Fill in your plan for the patient here

See how your plan compares

2.15 Plan Answers

CFPCLearn

Michelle Reblok



These are some potential points for the patient.
How does your plan compare?

- Bloodwork
- Counselling
- Low FODMAP Diet
- Follow Up

Click on the buttons to see suggested answers

Name (Slide Layer)

The screenshot shows a patient profile slide layer. At the top left is the 'SCFPCLearn' logo. The patient's name, 'Michelle Reblok', is displayed in large blue text. To the right is a circular profile picture of a woman with blonde hair. Below the name is a question: 'These are some potential points for the patient. How does your plan compare?'. On the left side, there is a vertical menu with four blue buttons: 'Bloodwork', 'Counselling', 'Low FODMAP Diet', and 'Follow Up'. On the right, a light blue box contains the text: 'Meaning Behind the Name: Michelle Reblok'. A small 'x' icon is in the top right corner of this box. There are also several circular icons on the left side of the slide layer.

Bloodwork (Slide Layer)

This screenshot shows the same patient profile slide layer as above, but with the 'Bloodwork' button selected. The light blue box on the right now contains the following text: 'Bloodwork You provide Michelle with a lab requisition which includes:'. Below this, there is a bulleted list: '• CBC', '• ATTG', '• fecal calprotectin', and '• +/- CRP'. The 'x' icon remains in the top right corner of the box.

Follow Up (Slide Layer)

SCFFClearn

Michelle Reblok

These are some potential points for the patient.
How does your plan compare?

- Bloodwork
- Counselling
- Low FODMAP Diet
- Follow Up

Follow Up
You ask Michelle complete her blood work, and then return for follow in about 4-6 weeks.

Counselling (Slide Layer)

SCFFClearn

Michelle Reblok



These are some potential points for the patient.
How does your plan compare?

- Bloodwork
- Counselling
- Low FODMAP Diet
- Follow Up

Counselling
You indicate there are no red flags for cancer and that you are doing blood work to rule out celiac disease and inflammatory bowel disease. You suggest a moderate fibre diet and psyllium for starters and indicate you will follow-up with her to review her response to the dietary changes and you will call her with any abnormal blood work results.

Low FODMAP Trial (Slide Layer)

CFPCLearn



Michelle Reblok

These are some potential points for the patient.
How does your plan compare?

- Bloodwork
- Counselling
- Low FODMAP Diet
- Follow Up

FODMAP Diet



You provide some handouts on the FODMAP diet. Here are some helpful ones:

- [The Low FODMAP Diet handout](#) from Stanford Hospital and Clinics
- [Understanding FODMAPS handout](#) from the Canadian Digestive Health Foundation

CFPCLearn

2.16 References

CFPCLearn



References

Thanks for visiting the clinic!

References are available [here](#).

This activity is eligible for up to 0.25 Mainpro+ credits.

CFPCLearn