

MammoCoach

How it works

Register

Sign up for an account
at MammoCoach.com

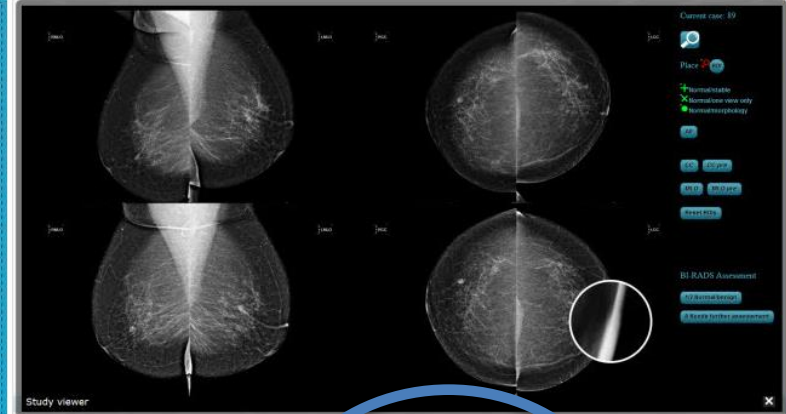


Home The Concept CME FAQs
For Screening Mammography

How it works About Us
Login Sign up

The Case Viewer

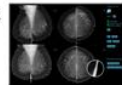
The case viewer offers multiple viewing protocols, resembling the real workstation. A magnification tool allows to zoom into minute details. Mark abnormal findings and decide which BIRADS category it is.



**Sign up for a
free trial!**

Viewer

The user reads the exams as on a real workstation and determines if normal or abnormal and if abnormal, where the pathology is located and what is seen.

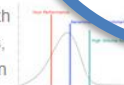


An intelligent coordinate based algorithm saves the pathology location. After the exam, the system calculates the user results with the true results and provides detailed analytics about user performance and comparison with their peers.

[find out more](#)

Results

Results provide analytics with percentage of correct cases, correct BIRADS classification and diagnosis.



Each case can be reviewed and your ROIs can be compared to the "true positives". Each case can be also reviewed by comparing your ROIs with the ROIs your peers have marked. Are you with the mainstream or off?

[find out more](#)

Case Collection

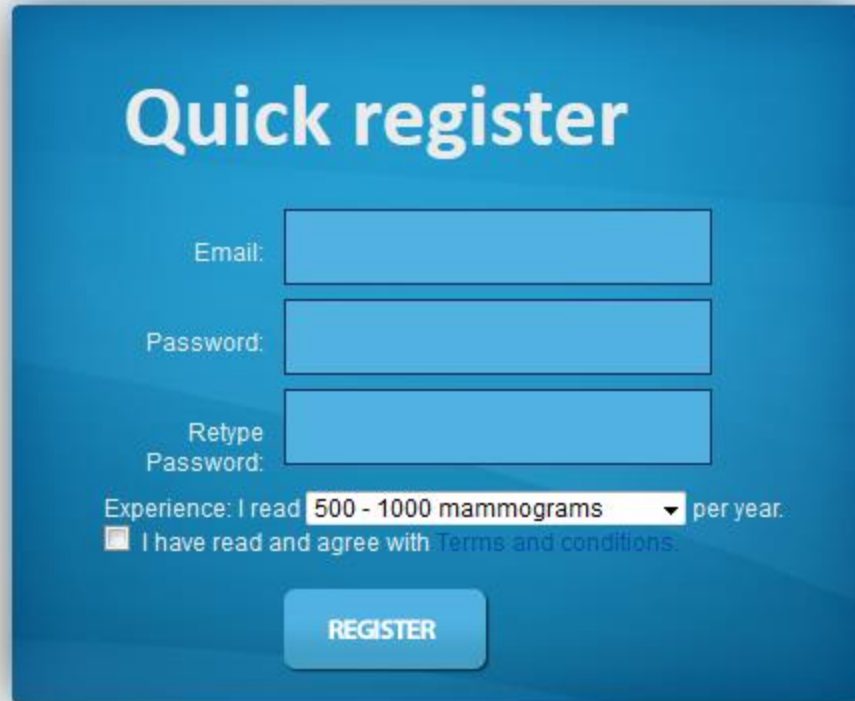
Based on the buzzwords the participant will have access to an electronic version of a case based learning file



[find out more](#)

Register

Please enter your email (for verification), password and select your experience level (how many mammograms do you read per year)

A registration form titled "Quick register" on a blue background. It contains three input fields for "Email:", "Password:", and "Retype Password:". Below these is a dropdown menu for "Experience: I read" with "500 - 1000 mammograms" selected, followed by the text "per year.". There is a checkbox labeled "I have read and agree with" and a link "Terms and conditions.". At the bottom is a blue button labeled "REGISTER".

Quick register

Email:

Password:

Retype Password:

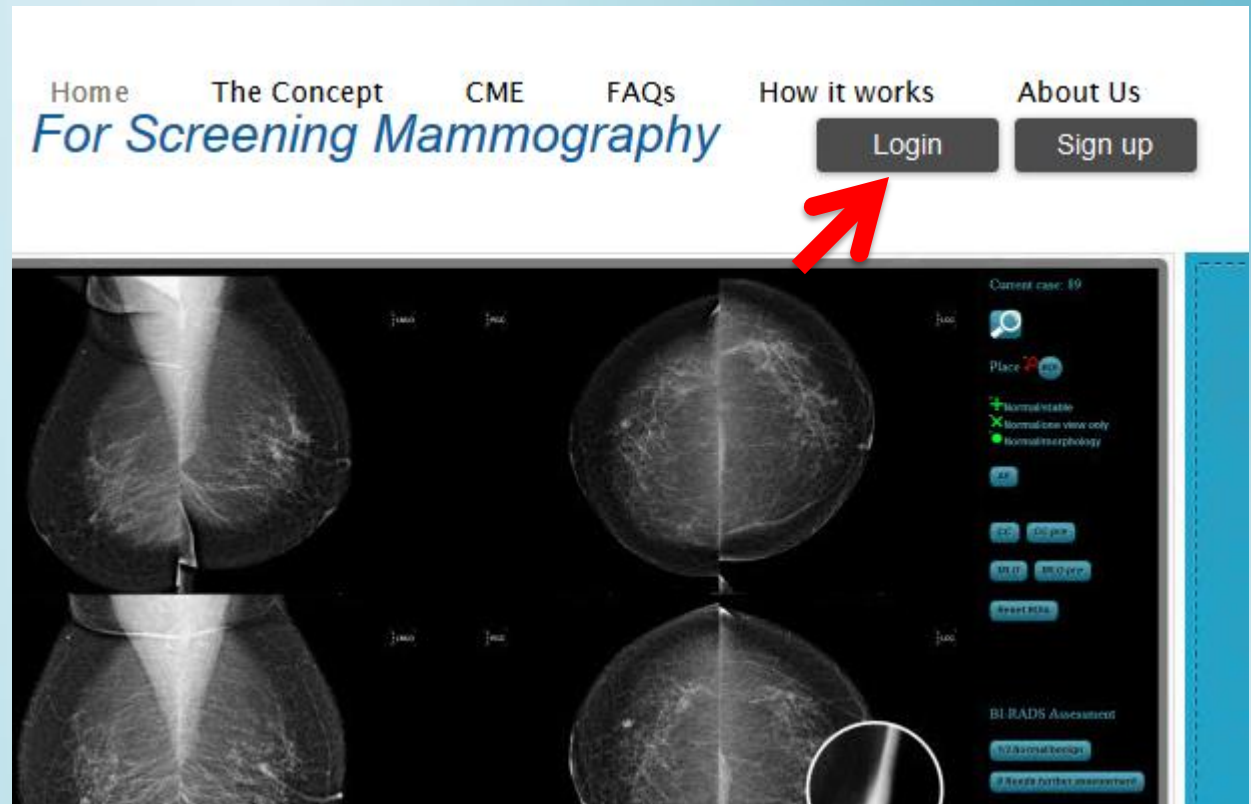
Experience: I read per year.

☐ I have read and agree with [Terms and conditions.](#)

REGISTER

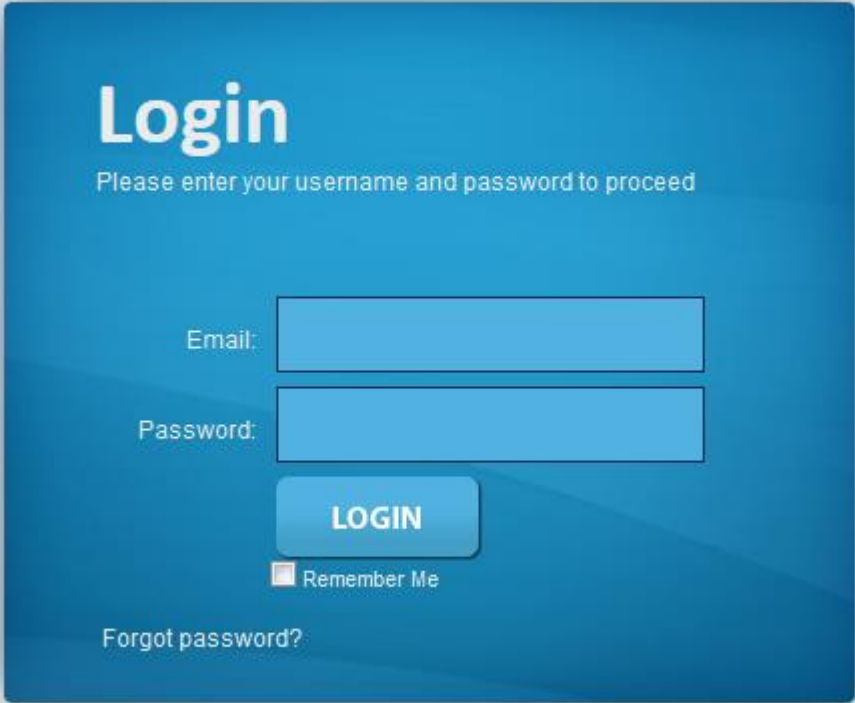
Login

You may now login



Login

Login with the data
you registered



The image shows a login form with a blue background. At the top, the word "Login" is written in white. Below it, a subtitle says "Please enter your username and password to proceed". There are two input fields: "Email:" and "Password:". Below the password field is a blue "LOGIN" button. Under the button is a checkbox labeled "Remember Me". At the bottom left of the form is a link "Forgot password?". Below the entire form is a link "Register a new account".

Login

Please enter your username and password to proceed

Email:

Password:

LOGIN

☐ Remember Me

[Forgot password?](#)

[Register a new account](#)

Profile

Please complete your profile

Your subscription status

Currently, you do not have an active subscription. However, the first session is free. You can find it [here](#)

User details (click on items to edit and click on "done" to save)

First name: press here to set it

Last name: press here to set it

Email:

Experience: novice

Exam window size: press here to set it

Address: press here to set it

Country: press here to set it

Change Password (press here)

Profession: press here to set it



User details (click on items to edit and click on "done" to save)

First name: press here to set it

[done](#)

Last name: press here to set it

Email:

Experience: novice

Exam window size: press here to set it

Address: press here to set it

Country: press here to set it

Change Password (press here)

Profession: press here to set it

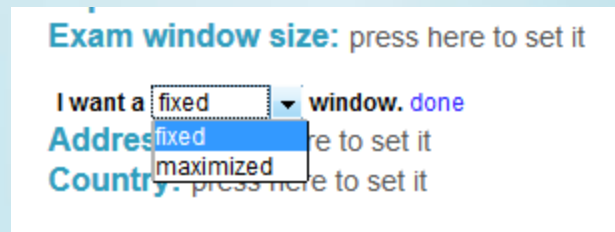
Click on "done"
for each field



Preferences

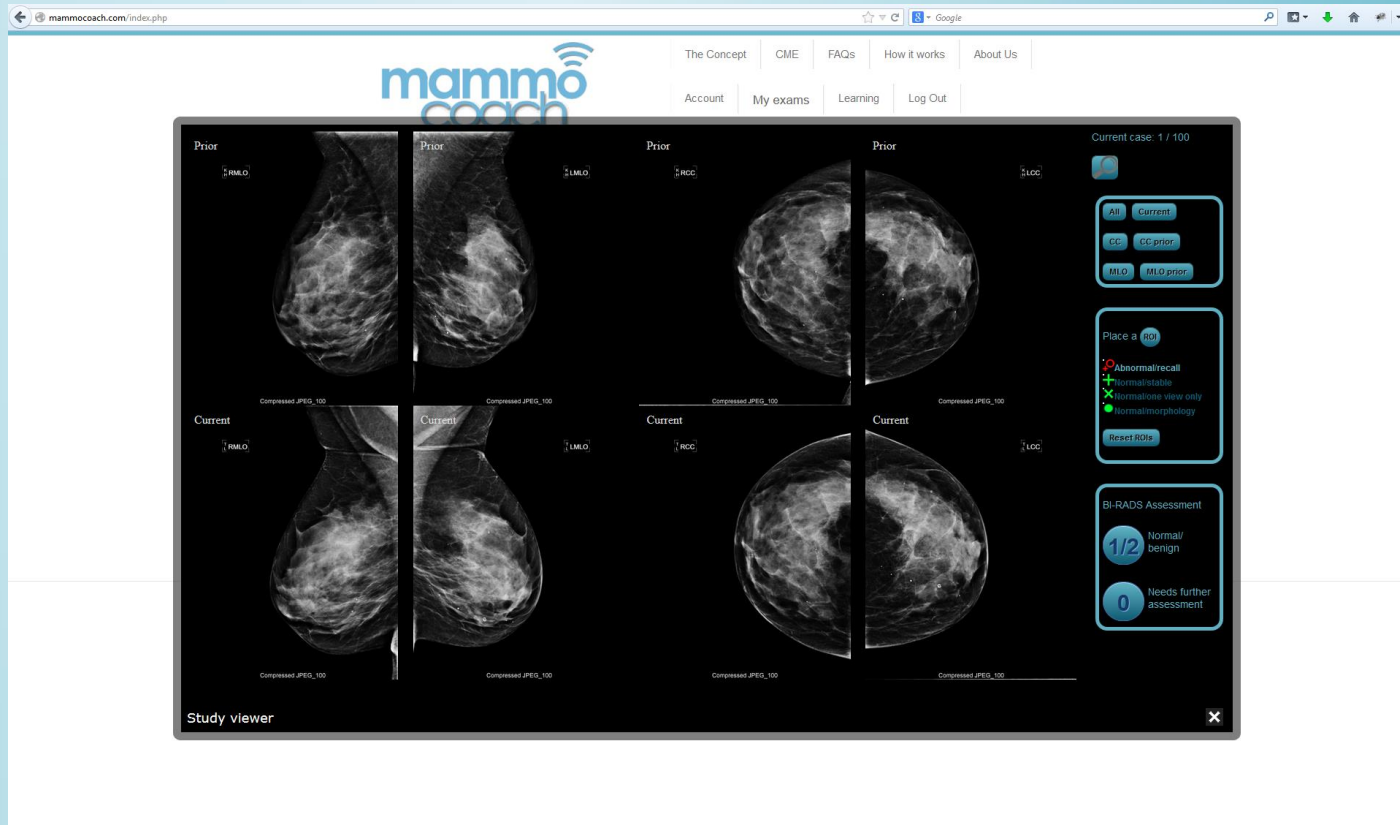
In your profile, you may set your preferences how you would like to open the viewer window.

Two options are available: fixed size and maximized (which expands the window to the full dimensions of your browser).



Session

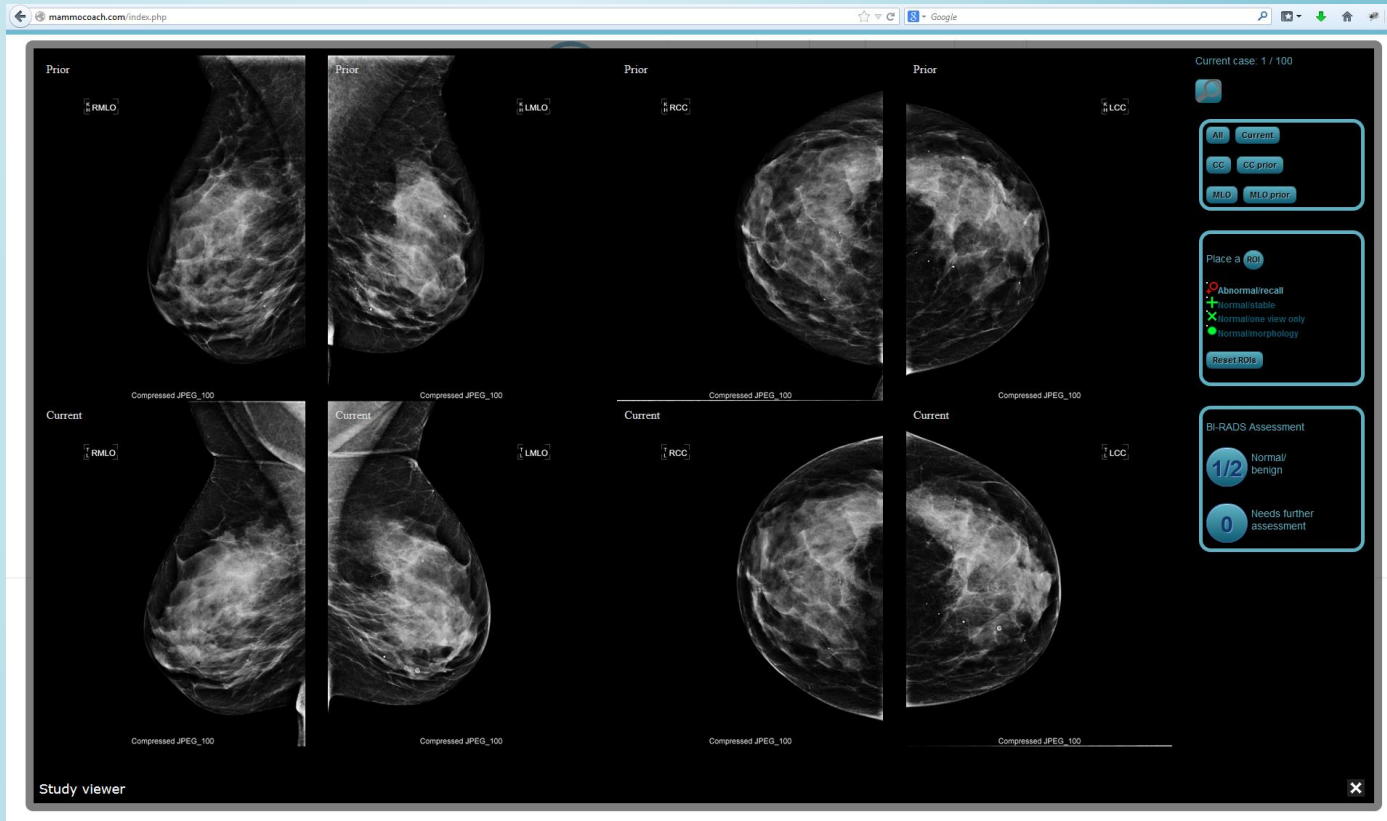
Difference between window preferences



This is an example of “fixed” window size chosen in your profile. This option shows the viewer always in the same dimensions – independent on the browser/screen size

Session

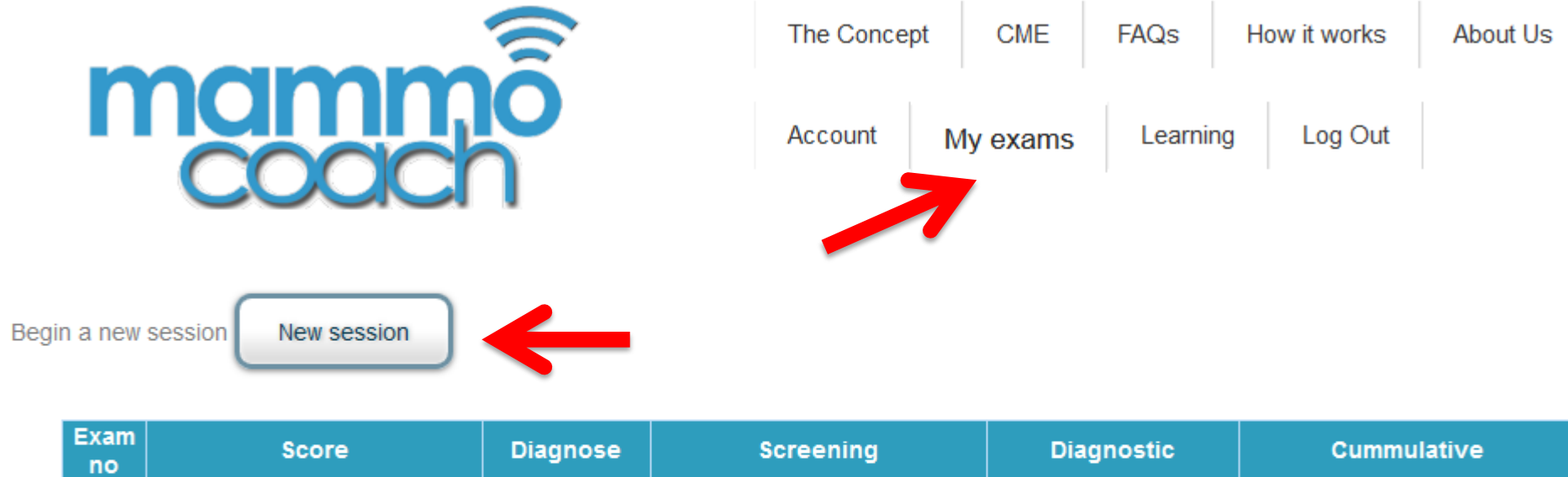
Difference between window preferences



This is an example of “maximized” window size chosen in your profile. This option shows the viewer **DEPENDING** on the browser/screen size.

Session

To start your session, please go on “My exams” in the top menu and then click the “New session” button



The screenshot shows the MammoCoach website. The logo 'mammo coach' is on the left. The top navigation menu includes 'The Concept', 'CME', 'FAQs', 'How it works', 'About Us', 'Account', 'My exams', 'Learning', and 'Log Out'. A red arrow points to the 'My exams' link. Below the menu, there is a section titled 'Begin a new session' with a 'New session' button. Another red arrow points to this button. Below this section is a table with columns for 'Exam no', 'Score', 'Diagnose', 'Screening', 'Diagnostic', and 'Cumulative'.

Exam no	Score	Diagnose	Screening	Diagnostic	Cumulative
---------	-------	----------	-----------	------------	------------

There are 1000 total cases. After you finish them, new features will be unlocked.
Each session has 100 cases. You can diagnose them after finishing it.
Receive a free passport to www.radiologycasereviews.com (locked)
More cases are waiting for you! (locked)

Session

If you started a session, please click on “Continue exam”

[The Concept](#)[CME](#)[FAQs](#)[How it works](#)[About Us](#)[Account](#)[My exams](#)[Learning](#)[Log Out](#)[Continue exam](#)

Session

Tip!

Maximize your browser window to the maximum of your monitor/screen size!

Session

Time for a coffee? You may discontinue your session at ANY time!
Click on “Continue exam” to continue where you stopped.

[The Concept](#)[CME](#)[FAQs](#)[How it works](#)[About Us](#)[Account](#)[My exams](#)[Learning](#)[Log Out](#)

Exam no	Score	Diagnose	Screening	Diagnostic	Cummulative
1	Continue exam	Diagnostic	locked in demo	locked in demo	locked in demo

Your subscription is not active.

Your sessions are stored and you can see them again when you activate a new subscription. The first session is free.

There are 1000 total cases. After you finish them, new features will be unlocked.

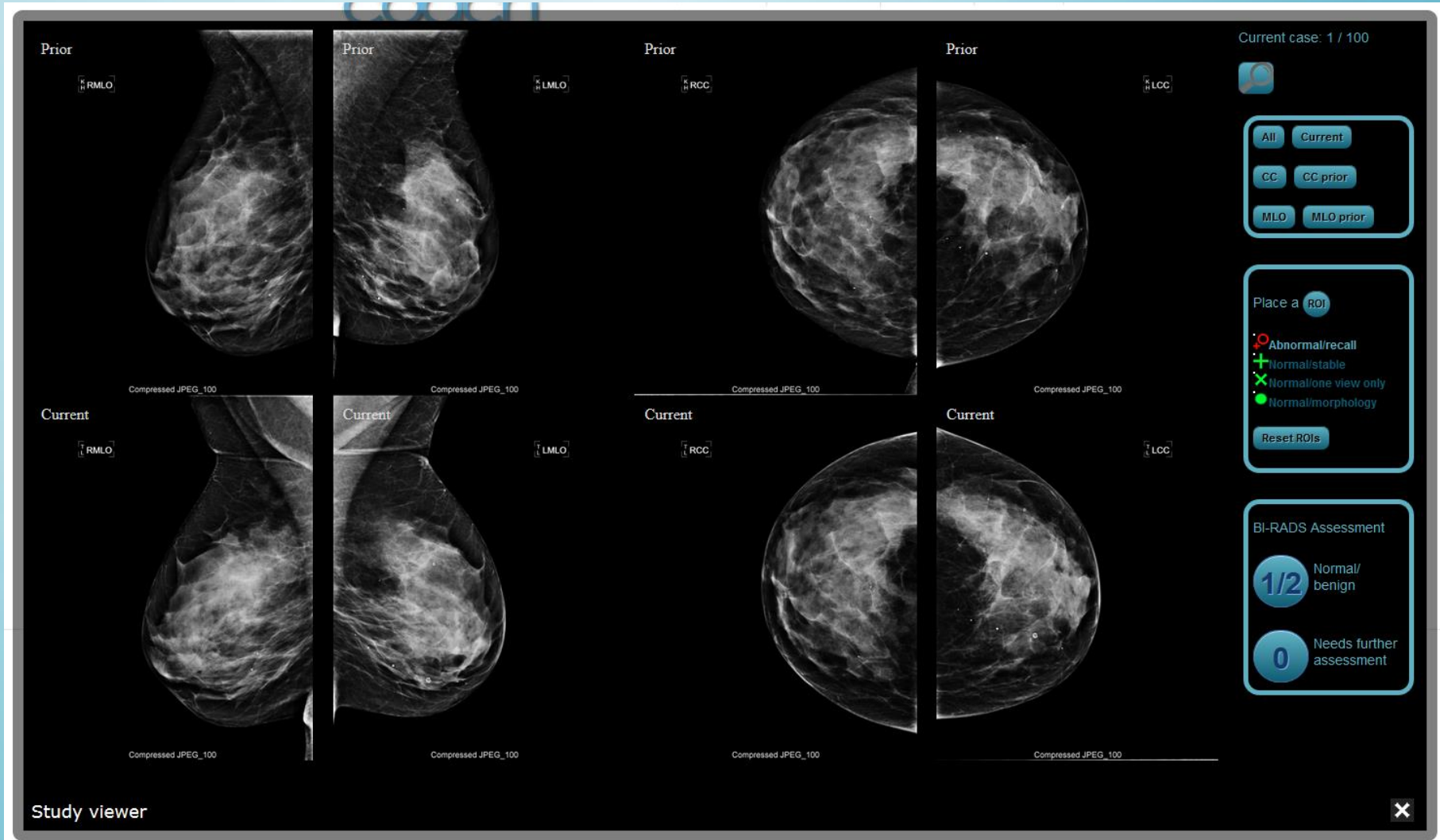
Each session has 100 cases. You can diagnose them after finishing it.

Receive a free passport to www.radiologycasereviews.com (locked)

More cases are waiting for you! (locked)

Session

The viewer



Session

The viewer – Two sections: Image section and control menu

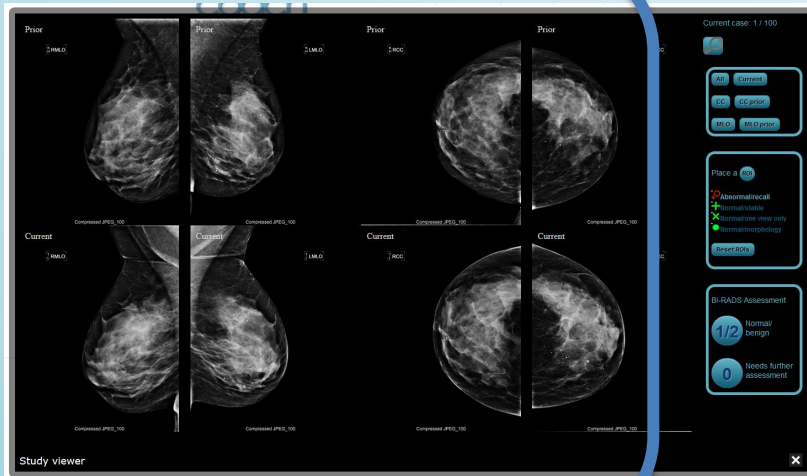
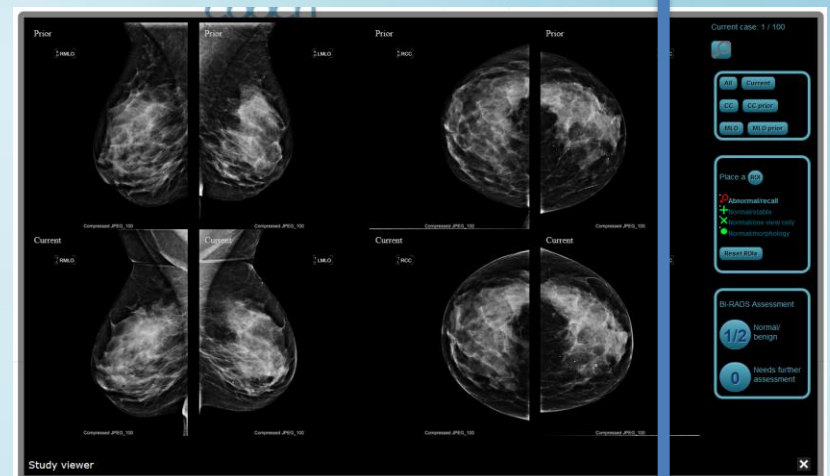


Image section



Control menu

Session

The viewer – Control menu

The image shows a screenshot of the MammoCoach viewer interface. A large blue semi-transparent rectangle is overlaid on the center of the screen, containing four yellow text labels: "Magnifying glass", "Hanging protocols", "Region of interests (ROIs)", and "Decision". Four yellow arrows point from these labels to the right-hand control menu. The control menu is located on the right side of the viewer and includes the following elements:

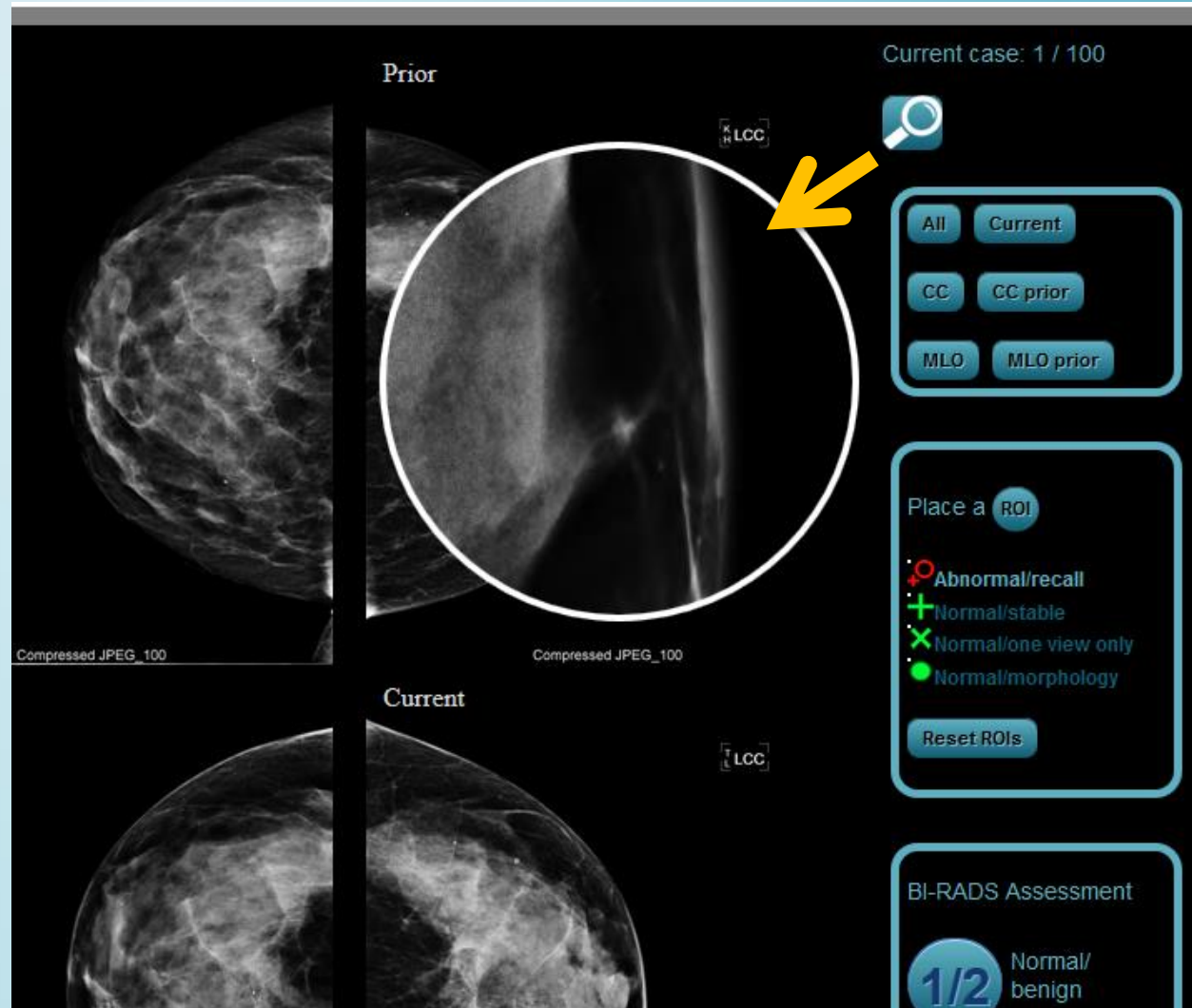
- Top right: "Current case: 1 / 100" and a magnifying glass icon.
- Buttons: "All", "Current", "CC", "CC prior", "MLO", and "MLO prior".
- ROI section: "Place a ROI" with a red circle icon, a legend for "Abnormal/recall" (red circle), "Normal/stable" (green plus), "Normal/one view only" (green X), and "Normal/morphology" (green dot), and a "Reset ROIs" button.
- BI-RADS Assessment section: Two circular buttons showing "1/2" (labeled "Normal/benign") and "0" (labeled "Needs further assessment").

The background of the viewer shows a grid of mammogram images. The top row is labeled "Prior" and the bottom row is labeled "Current". Each image has a small label in the top left corner: "RMLO" for the first column, "LMLO" for the second, and "RCC" for the third. The images are labeled "Compressed JPEG_100" at the bottom. The bottom left corner of the viewer has the text "Study viewer" and a close button (X) in the bottom right corner.

Session

The viewer – Control menu – Magnifying glass

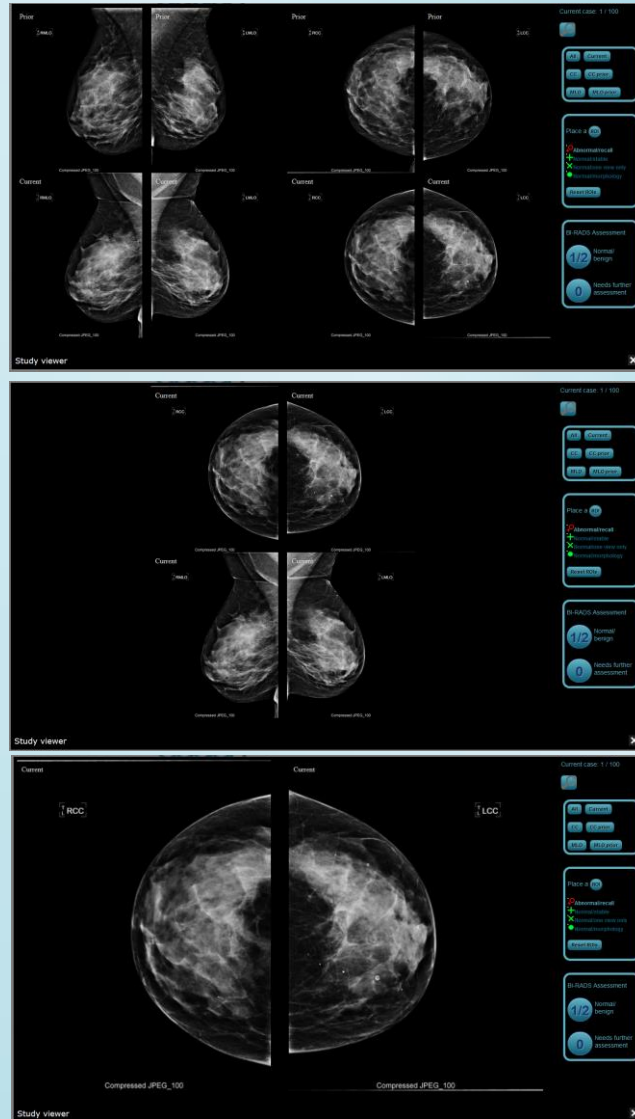
To activate the magnifying glass, click on the symbol. When activated, the symbol turns white and you will see a magnified view when hovering over the respective area on the images.



Session

The viewer – Control menu – Hanging protocols

Different “Hanging protocols” allow displaying images at your convenience, such as all at once, only the current or prior study, CC or MLO views.



Current case: 1 / 100

All Current

CC CC prior

MLO MLO prior

Place a ROI

- Abnormal/recall
- Normal/stable
- Normal/one view only
- Normal/morphology

Reset ROIs

BI-RADS Assessment

1/2 Normal/benign

0 Needs further assessment

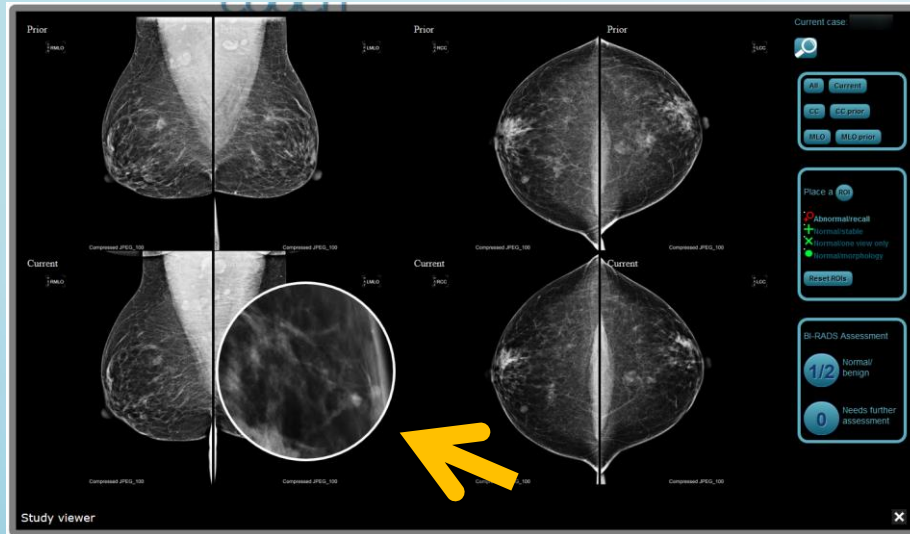
Session

Tip!

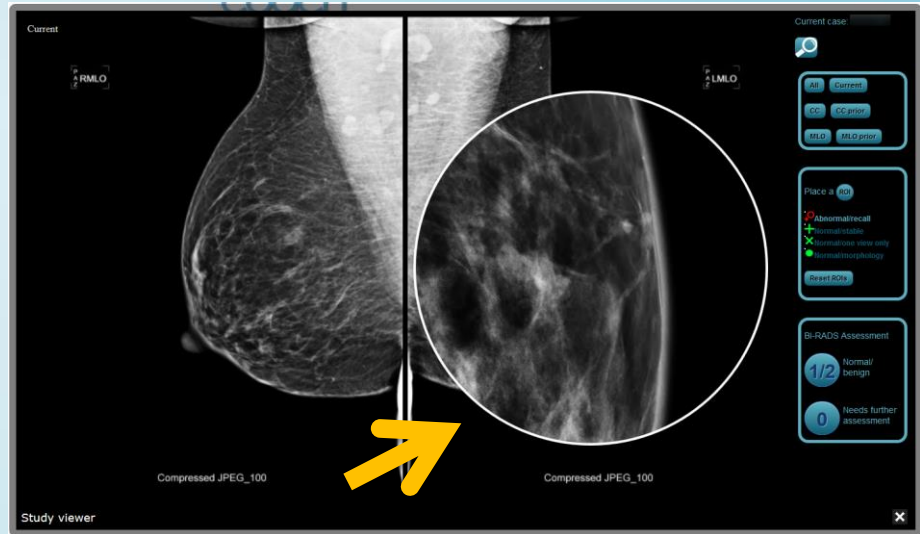
To optimize the magnified area, change the hanging protocol to CC or MLO only

Session

Tip! – Optimal usage of magnified area



“All” hanging protocol



“MLO” hanging protocol

Session

The viewer – Control menu – ROIs

We offer different sets of markers.

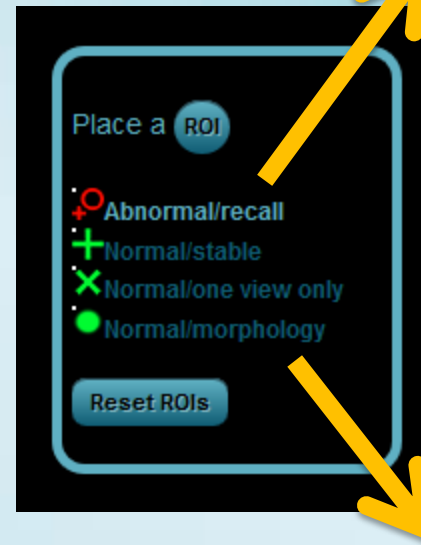
Abnormal areas are marked with a red marker and will be “recalled”.

Mark “normal” findings which you would NOT call back and chose one of the three reasons*:

normal or benign because...

- stable
- only seen on one view
- because of normal morphology

Red = abnormal
= recall



Green* = normal/benign

*By marking "normal" findings, MammoCoach intends to enhance the learning experience for Radiologists who might be less experienced, and to teach avoiding unnecessary call backs.

Session

The viewer – Control menu – ROIs

Markings are done by DOUBLECLICKING on the area of interest. There might be a slight discrepancy between the exact location of the marker and where you clicked – that's ok. It does not have to be the same “pixel”.

...and don't worry...

If you set a marker erroneously, you may reset all markings again by clicking on the “Reset ROIs” button.



Session

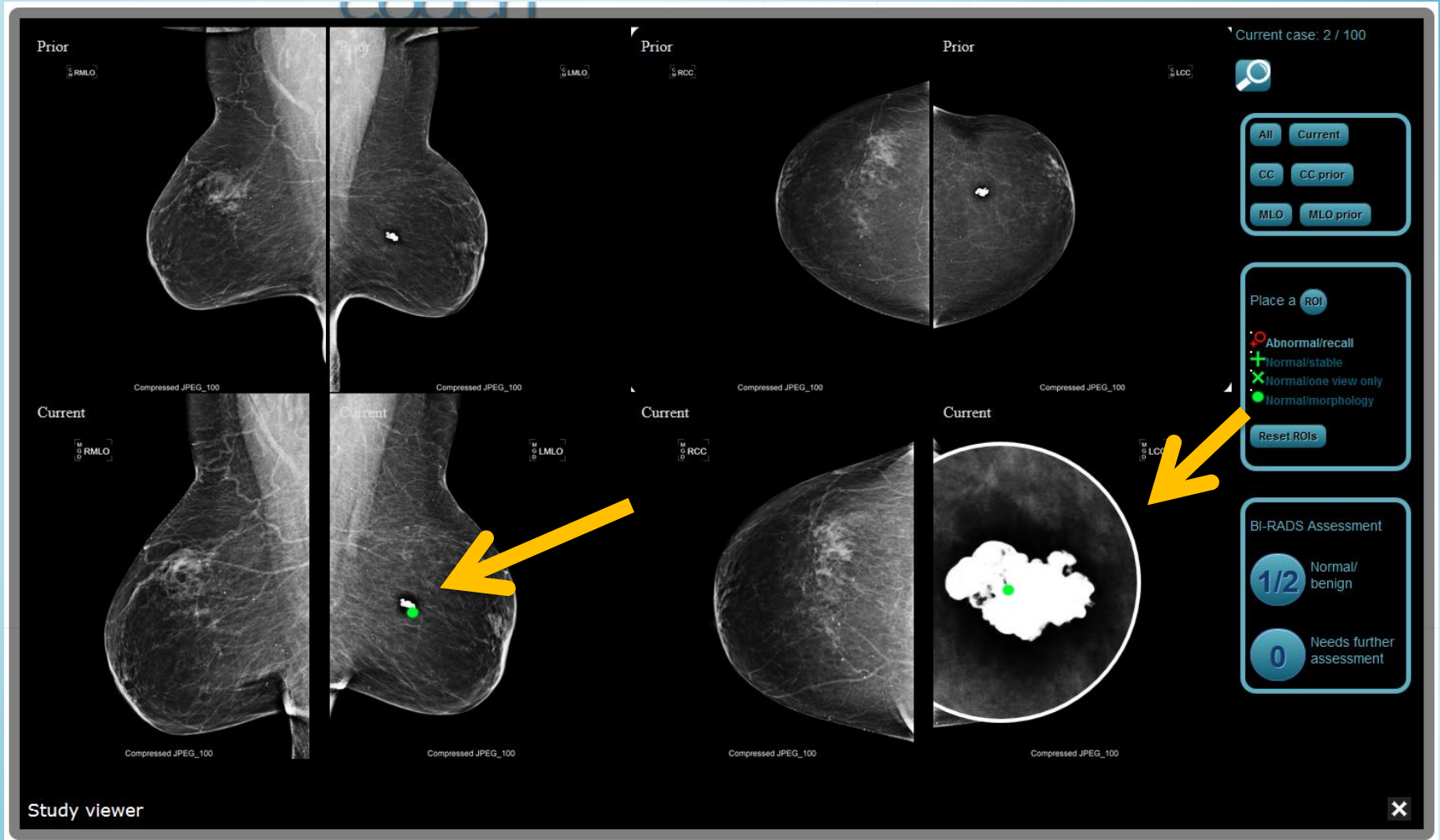
The viewer – Marking ROIs



Example of a “Abnormal/Recall” marking

Session

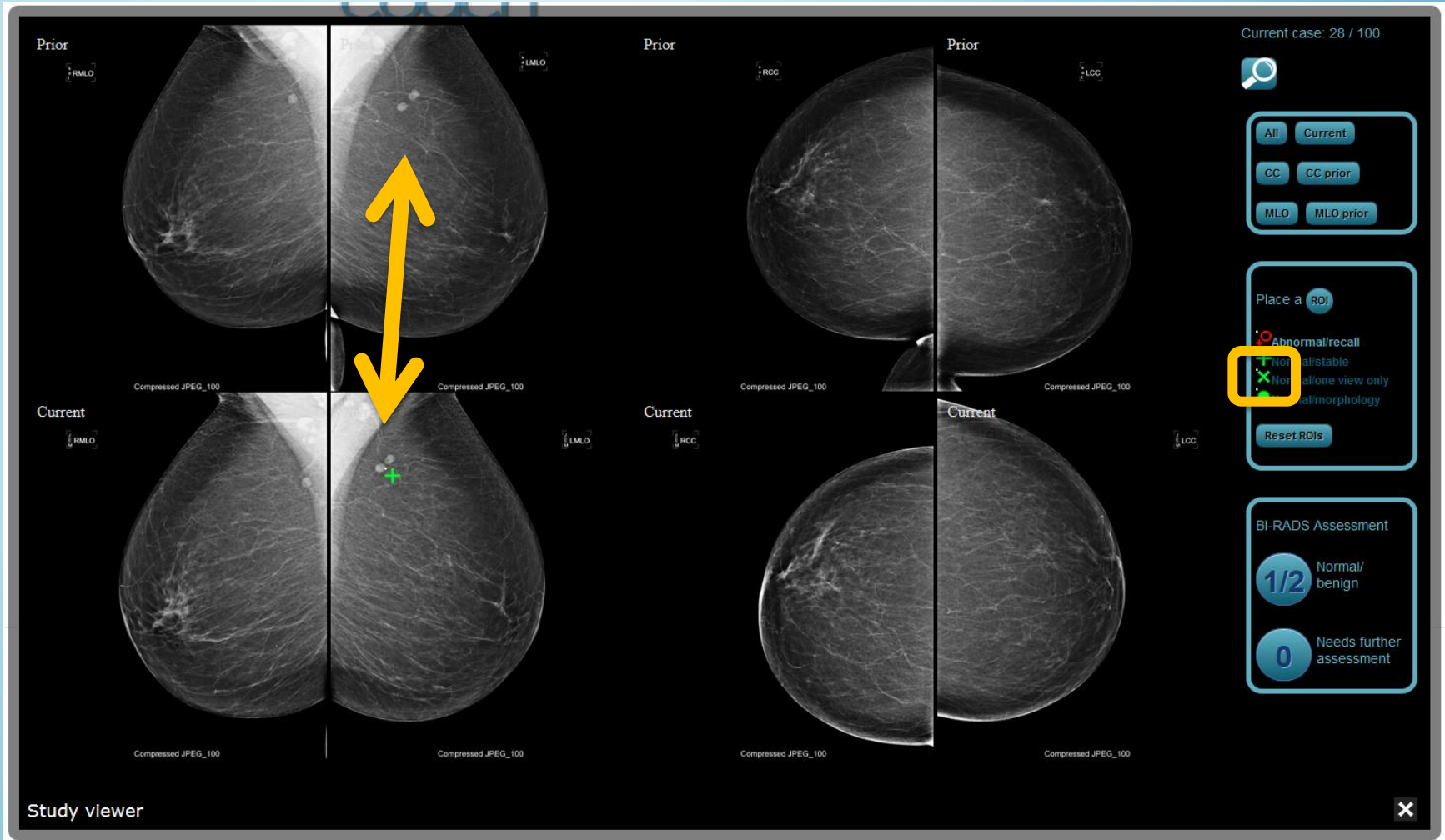
The viewer – Marking ROIs



Example of a “normal”/benign marking (popcorn calcification)

Session

The viewer – Marking ROIs



Example of a “normal”/benign marking (stable)

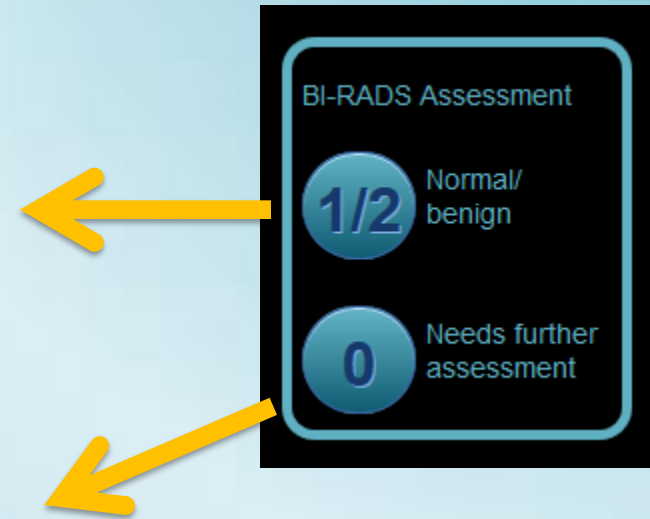
Session

The viewer – Control menu – Decision

There are two decisions that can be made:

BI-RADS 1 or 2, which do not require a diagnostic study for further assessment.

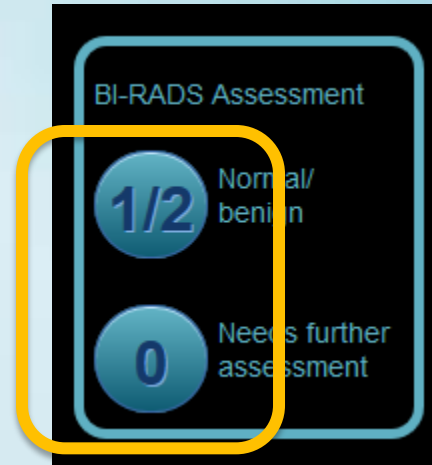
BI-RADS 0, which requires a red marking and calls for a diagnostic study.



Session

The viewer – Control menu – Decision

As soon as a decision has been made (button clicked) you will proceed to the next case.



Session

After the screening session you will go over your recalled cases

Congratulations! You just finished the screening portion of one session of MammoCoach. Now, it is time to review your recalled cases. Only your recalled cases, which were also recalled by the authors, will be shown. You will go through all the diagnostic additional images, including Ultrasound if available, and make your final BI-RADS judgment. However, after the diagnostic workup you can still see all the screening cases, including the "normal" ROI's.


Ok

Study viewer



Session

You may take a break before going over your recalled cases or continue by clicking on “Diagnostic”.



[The Concept](#) | [CME](#) | [FAQs](#) | [How it works](#) | [About Us](#)

[Account](#) | [My exams](#) | [Learning](#) | [Log Out](#)

Exam no	Score	Diagnose	Screening	Diagnostic	Cummulative
1	98 (sensitivity 50%)	Diagnostic	locked in demo	locked in demo	locked in demo

Your subscription is not active.
Your sessions are stored and you can see them again when you activate a new subscription. The first session is free.

There are 1000 total cases. After you finish them, new features will be unlocked.
Each session has 100 cases. You can diagnose them after finishing it.
Receive a free passport to www.radiologycasereviews.com (locked)
More cases are waiting for you! (locked)

Session

To proceed with the diagnostic workup of your recalled cases click the following link.

[The Concept](#)[CME](#)[FAQs](#)[How it works](#)[About Us](#)[Account](#)[My exams](#)[Learning](#)[Log Out](#)

[Continue to the diagnostic workup of your recalled cases](#)



Session

Now go one by one through your recalled cases.

The screenshot displays the MammoCoach interface for reviewing recalled cases. It features a grid of mammogram images arranged in two rows and two columns. The top row shows 'Prior' images, and the bottom row shows 'Current' images. Each image is labeled with its view (RMLO, LMLO, ROC, LCC) and a 'Compressed JPEG_100' label. A sidebar on the right contains a user profile icon, a 'Current' button, and a 'Diagnostic images' section with a 'Call Diagnostic mammogram' button and a status 'Ultrasound not present'. A yellow arrow points to the 'Call Diagnostic mammogram' button with the text 'Check diagnostic images'. The bottom left corner of the interface has a 'Diagnostic' label.

Prior

Prior

Prior

Prior

RMLO

LMLO

ROC

LCC

Compressed JPEG_100

Current

Current

Current

Current

RMLO

LMLO

ROC

LCC

Compressed JPEG_100

Compressed JPEG_100

Compressed JPEG_100

Compressed JPEG_100

Diagnostic

In this step, you can review the available diagnostic images and select the descriptors and the final birads. Note that you can not go back, so choose carefully. First select the descriptors, and after, the final birads.

Current case: 25 / 100

All Current

Diagnostic images

Call Diagnostic mammogram

Ultrasound not present

Check diagnostic images

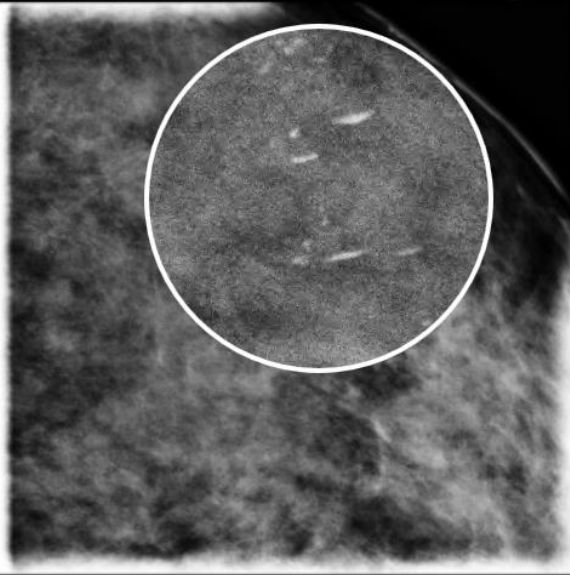
Session

Use available tools to make your decision.

Diagnostic

K
A
C

LMML

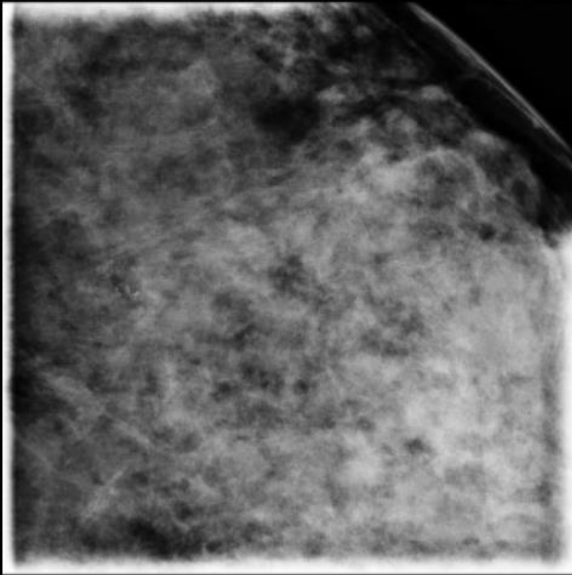


Compressed JPEG_100

Diagnostic

K
A
C


LMCC



Compressed JPEG_100

In this step, you can review the available diagnostic images and select the descriptors and the final birads. Note that you can not go back, so choose carefully. First select the descriptors, and after, the final birads.

Current case: 25 / 100



All Current

Diagnostic images


Call Diagnostic mammogram

Ultrasound not present

Choose first hierarchy ▾

Birads 2 benign exam - ret ▾

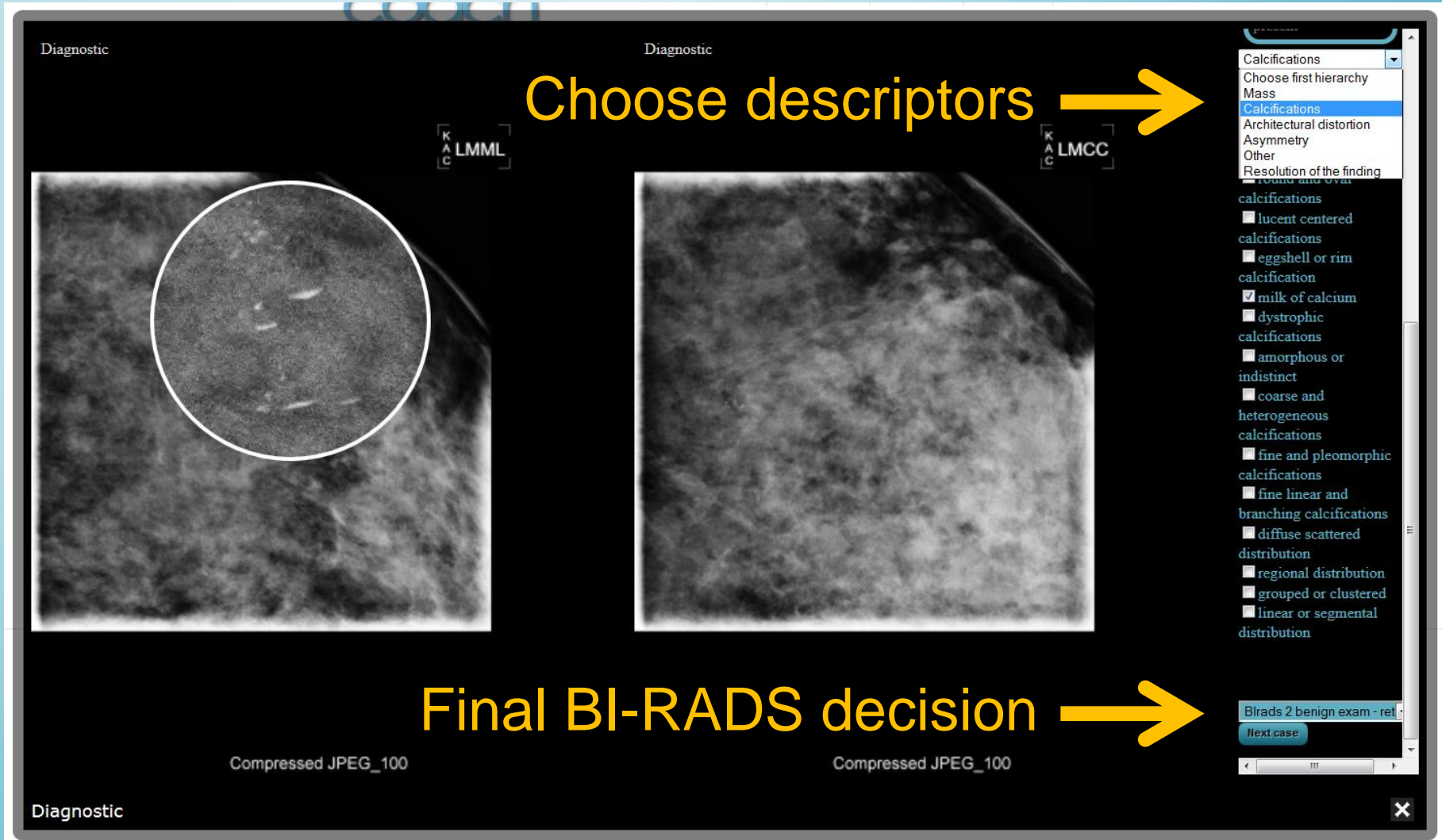
Next case

Diagnostic 

Session

Select the descriptor and your final BI-RADS decision.

Choose descriptors →

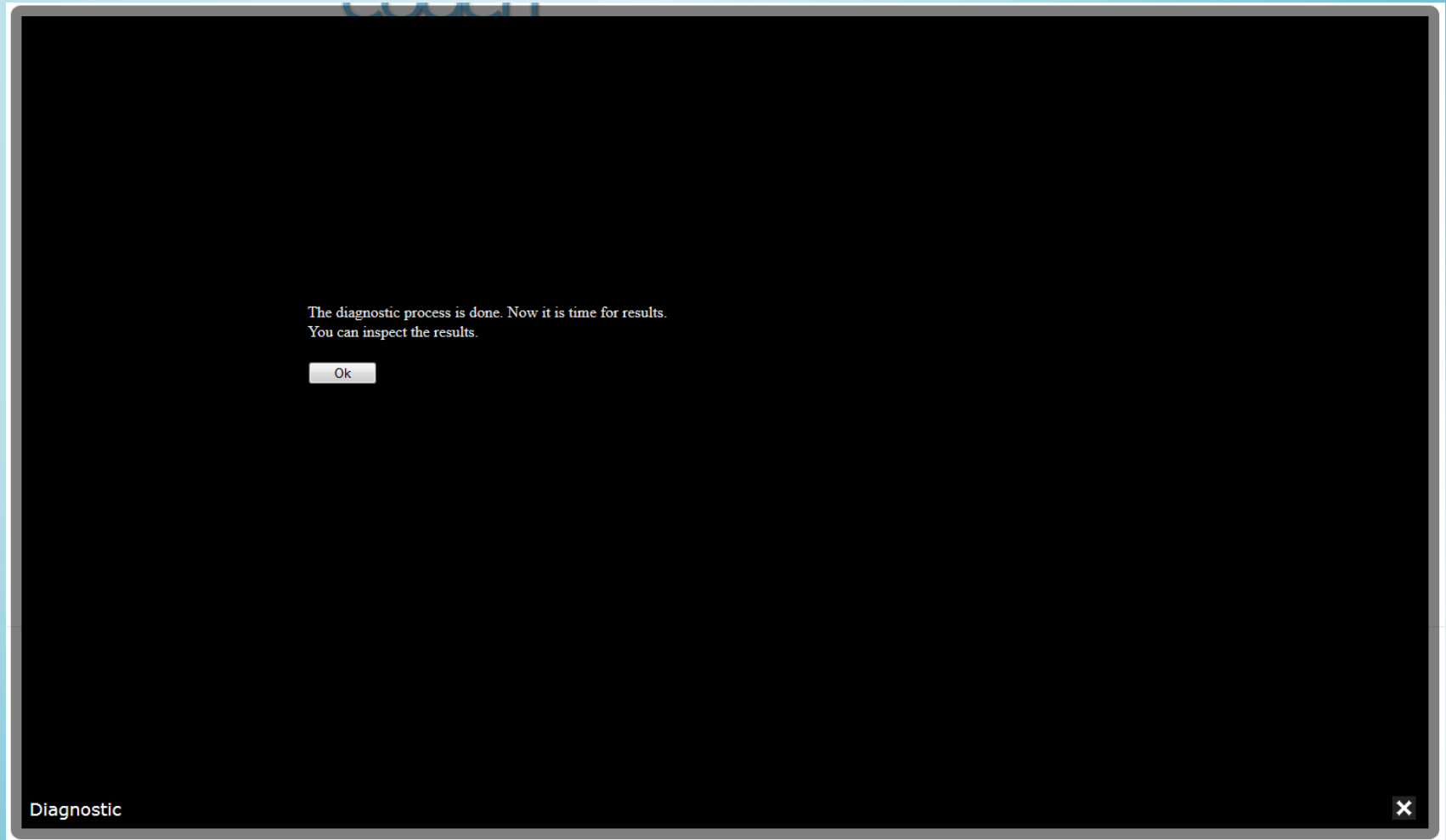


The screenshot displays the MammoCoach software interface. It features two mammogram images side-by-side. The left image is labeled 'LMML' and the right image is labeled 'LMCC'. Both images are marked 'Diagnostic' and are 'Compressed JPEG_100' files. A large yellow arrow points from the text 'Choose descriptors' to a dropdown menu on the right. The dropdown menu is open, showing a list of descriptors under the 'Calcifications' category. The descriptors include: 'Choose first hierarchy', 'Mass', 'Calcifications', 'Architectural distortion', 'Asymmetry', 'Other', and 'Resolution of the finding'. Below the dropdown menu, there is a list of descriptors with checkboxes: 'lucent centered calcifications', 'eggshell or rim calcification', 'milk of calcium', 'dystrophic calcifications', 'amorphous or indistinct', 'coarse and heterogeneous calcifications', 'fine and pleomorphic calcifications', 'fine linear and branching calcifications', 'diffuse scattered distribution', 'regional distribution', 'grouped or clustered', and 'linear or segmental distribution'. At the bottom right, there is a button labeled 'Next case' and a status bar showing 'Brads 2 benign exam - ret'.

Final BI-RADS decision →

Session

After you are done with your recalled cases, you will be shown your evaluation with detailed analysis and statistics.






Analysis

Click on the statistics icons to review your results and statistics

[The Concept](#)[CME](#)[FAQs](#)[How it works](#)[About Us](#)[Account](#)[My exams](#)[Learning](#)[Log Out](#)

Begin a new session

New session

Exam no	Score	Diagnose	Screening	Diagnostic	Cummulative
1	98 (sensitivity 50%)	Diagnostic			



There are 1000 total cases. After you finish them, new features will be unlocked.
Each session has 100 cases. You can diagnose them after finishing it.
Receive a free passport to www.radiologycasereviews.com (locked)
More cases are waiting for you! (locked)

Analysis

Screening part analysis and statistics

By clicking on the screening statistics icon, a 2x2 table and a statistical analysis of your screening part is provided.

2x2 table

Statistics

The screenshot shows the MammoCoach website interface. At the top, there is a navigation bar with links: The Concept, CME, FAQs, How it works, About Us, Account, My exams, Learning, and Log Out. The MammoCoach logo is prominently displayed. Below the logo, there is a button labeled 'New session' and a link 'Begin a new session'. A table with five columns is shown: Exam no, Score, Diagnose, Screening, Diagnostic, and Cumulative. The 'Screening' column is highlighted with a yellow box. Below this table, a 2x2 table is displayed, showing the results of the screening analysis. The 2x2 table has columns for Cancer present, Cancer not present, and Total. The rows are User: positive (BIRADS 0), User: negative (BIRADS 1-2), and Total. The results are: True positive: 2, False positive: 1, False negative: 1, True negative: 96. Below the 2x2 table, statistical analysis is provided: Recall rate: 3.0% (3/100), Sensitivity: 50.0% (2/4), Specificity: 100.0% (96/96), Positive predictive value: 66.7% (2/3), and Negative predictive value: 99.0% (96/97). At the bottom, a table with four columns is shown: Case no, Diagnostic, Review, and Learn. The rows show four cases, all with 'True negative' in the Diagnostic column and a 'Review' link in the Learn column.

Exam no	Score	Diagnose	Screening	Diagnostic	Cummulative
1	98 (sensitivity 50%)	Diagnostic			

	Cancer present	Cancer not present	Total
User: positive (BIRADS 0)	True positive: 2	False positive: 1	3
User: negative (BIRADS 1-2)	False negative: 1	True negative: 96	97
Total	3	97	100

Recall rate: 3.0% (3/100)
Sensitivity: 50.0% (2/4)
Specificity: 100.0% (96/96)
Positive predictive value: 66.7% (2/3)
Negative predictive value: 99.0% (96/97)

Case no	Diagnostic	Review	Learn
1	True negative	Review	
2	True negative	Review	
3	True negative	Review	
4	True negative	Review	

Analysis

Screening part analysis and statistics

Case no	Diagnostic	Review	Learn
1	True negative	Review	
2	True negative	Review	
...			
21	True negative	Review	
22	True negative	Review	
23	True negative	Review	
24	False negative	Review	Learn
25	False positive	Review	Learn
26	True negative	Review	
27	True negative	Review	
28	True negative	Review	
...			
46	True negative	Review	
47	True negative	Review	
48	True positive	Review	
49	True positive	Review	
50	True negative	Review	
51	True negative	Review	

Connection to
online book

Individual result

Review case

Also provided is the entire list of cases showing the individual results with link to review each case.

Analysis

Reviewing individual cases

The screenshot displays the MammoCoach software interface for reviewing individual cases. The main area shows a grid of mammogram images, with a large magnifying glass overlaying one of them. The interface includes a sidebar on the right with various controls and a legend at the bottom. Yellow arrows point from the text labels to specific features in the interface.

Magnifying glass

Hanging protocols

Review diagnostic studies

Comparing with peers

Marker legends

Current case: 49

All Current

Diagnostic studies

Call Diagnostic mammogram

Call Ultrasound

Compare with:

All

Novice (less than 500 cases per year)

Advanced novice (500-1000 cases per year)

Worker (1000-2000 cases per year)

Expert (2000-5000 cases per year)

Ace (more than 5000 cases per year)

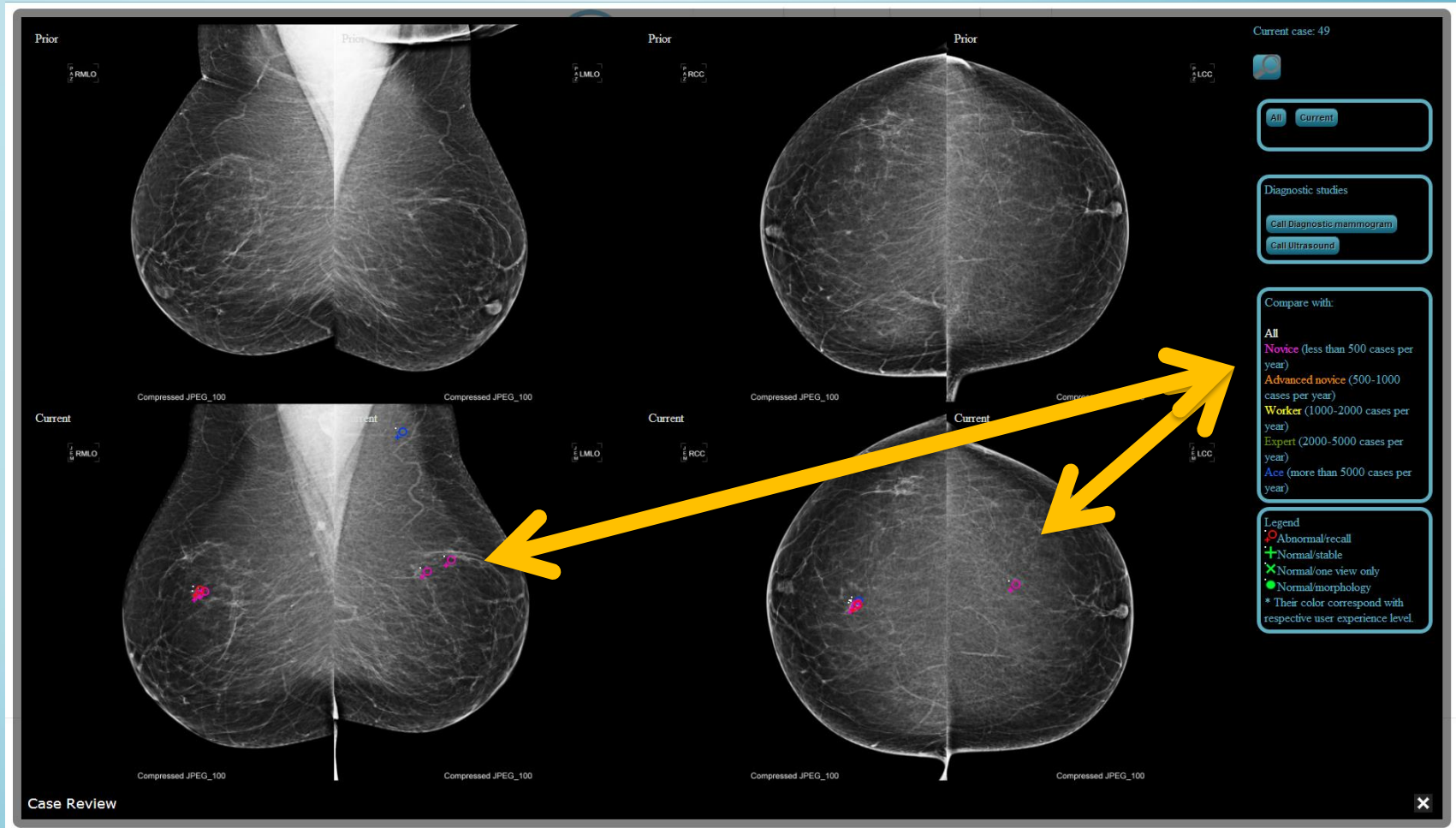
Legend

- Abnormal/recall
- Normal/stable
- Normal/one view only
- Normal/morphology
- * Their color correspond with respective user experience level.

Case Review

Analysis

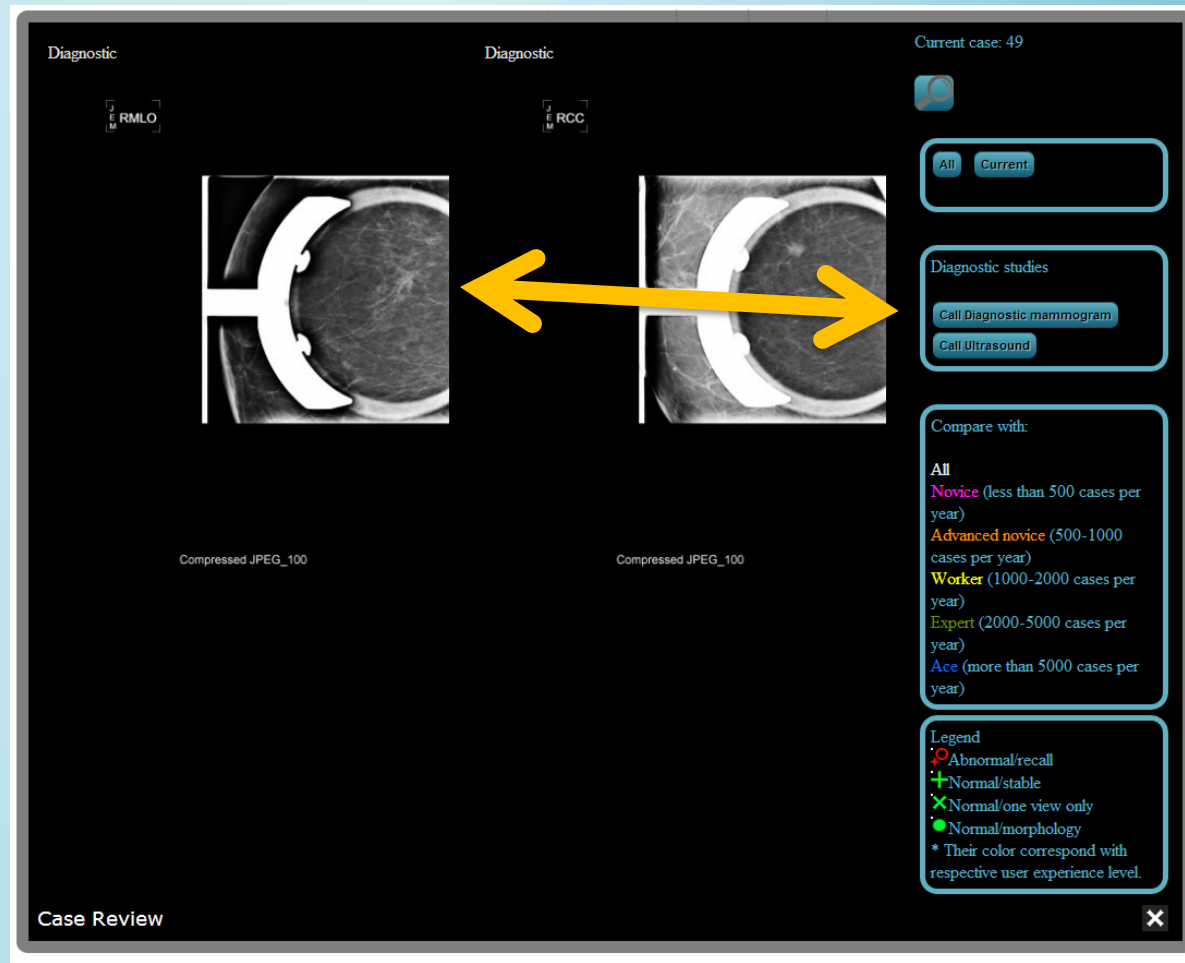
Reviewing individual cases



Compare with different experience levels (color coded)

Analysis

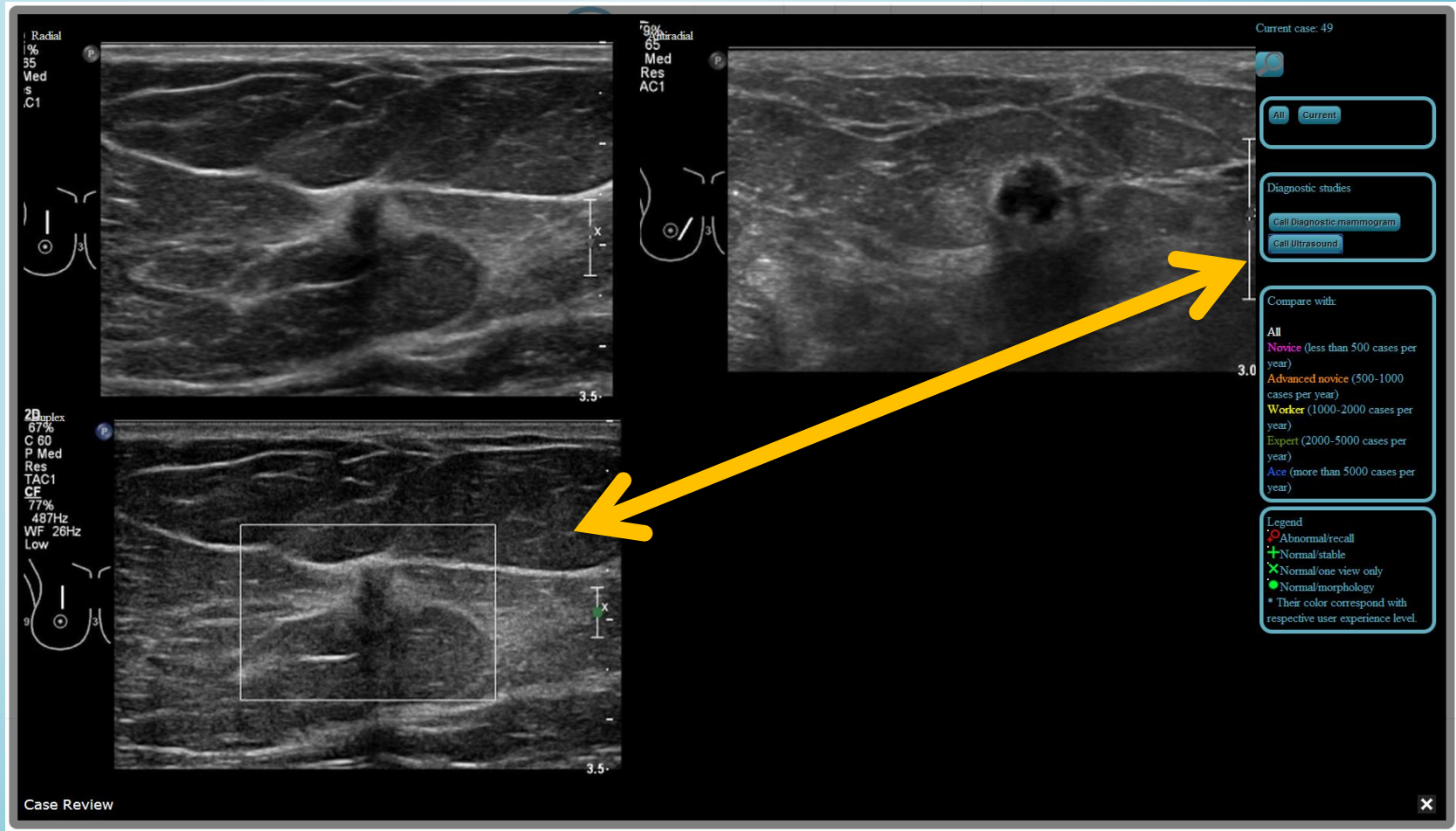
Reviewing individual cases



Reviewing diagnostic studies (mag/compression views)

Analysis




Reviewing individual cases



Reviewing diagnostic studies (Ultrasound images)

Analysis

Diagnostic part analysis and statistics

Exam no	Score	Diagnose	Screening	Diagnostic	Cummulative
1	98 (sensitivity 50%)	Diagnostic			

	Cancer present	Cancer not present	Total
User: positive (BIRADS 4-5)	True positive: 2	False positive: 0	2
User: negative (BIRADS 1-3)	False negative: 0	True negative: 1	1
Total	2	1	3

Recall rate: 66.7% (2/3)
Sensitivity: 50.0% (2/4)
Specificity: 100.0% (1/1)
Positive predictive value: 100.0% (2/2)
Negative predictive value: 100.0% (1/1)

2x2 table

Statistics

Case no	Diagnostic	Review
25	True negative	Review
48	True positive	Review
49	True positive	Review

The diagnostic analysis provides a 2x2 table, a statistical analysis and your recalled cases of the diagnostic part.

Survey

After finishing the complete MammoCoach, please take a brief survey.

The link will be displayed at the top of your statistics.

Thank you!