MoleMate
User Guide

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1. Introduction to MoleMate.

MoleMate allows you to bring SIAscopy into consultations within your practice. MoleMate is designed as an introduction to SIAscopy (our skin imaging technology) that is backed up with the Hunter scoring system; also know as the 'Primary Care SIAscopy Algorithm'. Developed by Dr Jude Hunter and first presented in poster format at the British Association of Dermatology 2006, titled;

'The diagnostic characteristics of SIAscopy versus dermoscopy for pigmented skin lesions presenting in primary care'

MoleMate has been designed for the clinician that is not an expert in either SIAscopy or Dermoscopy but who wants to increase diagnostic accuracy as well as patient satisfaction within lesion specific consultations.

MoleMate has been designed to help you identify some common benign lesions, as well as identify features in suspicious lesions. With MoleMate as a diagnostic tool to back up your clinical expertise along with the patient history you can reassure both yourself as well as your patients that the correct course of action has been taken.

The Hunter scoring system presents specific questions regarding the captured SIAscan. The questions are aimed at assisting you to identify specific features within the lesion that are visible using SIAscopy. Any presence of these features in melanin, dermal Melanin, blood or collagen views can be key indicators regarding the status of the lesion. After progressing through the Hunter scoring system a recommendation will be displayed to aid your diagnosis.

After regular use, you may find that you do not need to use the scoring system and simply assess the SIAscans looking at other characteristics within the individual views, therefore improving your sensitivity and specificity for suspicious lesions even further.

Further information regarding MoleMate, clinical papers or any of Astron Clinica's products can be found at the following website http://www.astronclinica.com or http://www.molemate.com
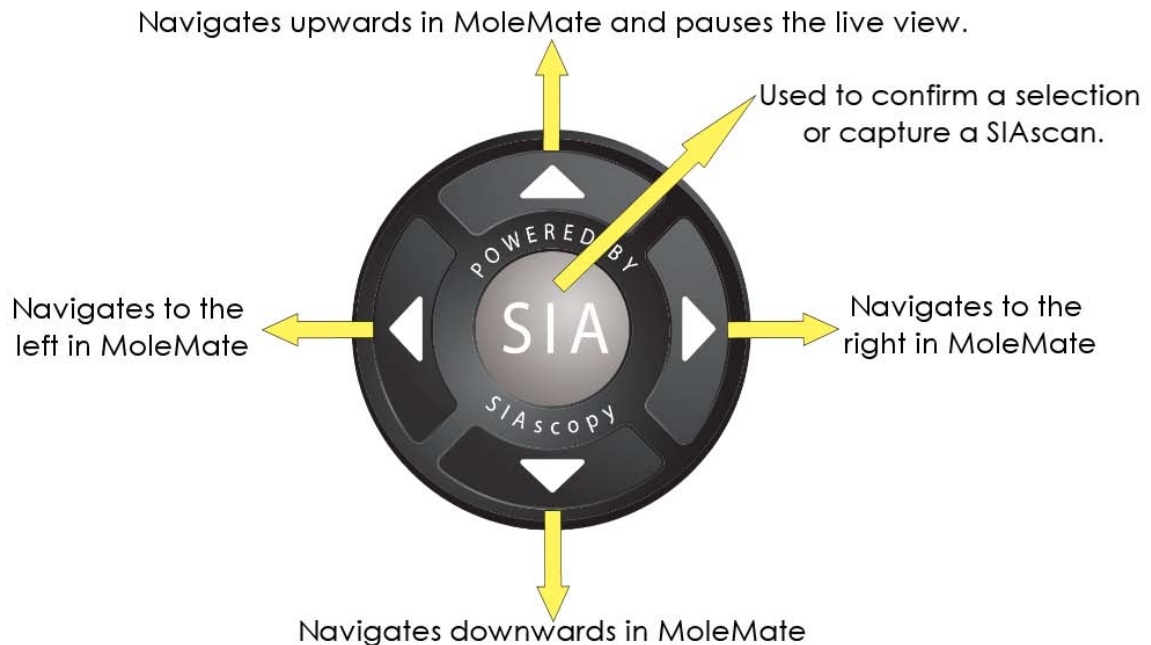
⚠ Important

Before using the SIAscope V it is important that the MoleMate Instructions for use manual has been read fully as it contains important information about the operation of the SIAscope V.

1.1. SIAscope V

The SIAscope V handset used in conjunction with MoleMate not only captures detailed SIAscans of the skin but also using the cleverly designed button it can be used to navigate throughout the MoleMate software. The functions of the SIAscope V button are shown in the image below.

Navigates upwards in MoleMate and pauses the live view.

Used to confirm a selection or capture a SIAscan.

Navigates to the left in MoleMate

POWERED BY
SIA
SIASCOPY

Navigates to the right in MoleMate

Navigates downwards in MoleMate

The design of the SIAscope V also means that it uses a USB 2.0 cable and port on the Computer used. This is particularly useful as the SIAscope V can be unplugged and transported along with the Computer to a different room or even a different building without any complicated set up involved each time.

⚠ Important

In order to obtain the best possible SIAscan it is essential that matching fluid is used whenever a SIAscan is taken. This is to help the light being emitted from the SIAscope V to penetrate the skins surface. To apply matching fluid simply use the spray dispenser supplied to cover the area being examined with the SIAscope V. Do not apply to much matching fluid as this can cause bubbles to appear in the final image. It is well worth taking some time to practice how much is needed to achieve the best results.

⛔ Warning

Do not apply matching fluid to open wounds or sores.

1.2. MoleMate Workflow.

MoleMate has been specifically engineered to allow a SIAscan to be captured, scored and have a report generated quickly. As the flow chart below shows, the path through the MoleMate software is very simple.

MoleMate Workflow
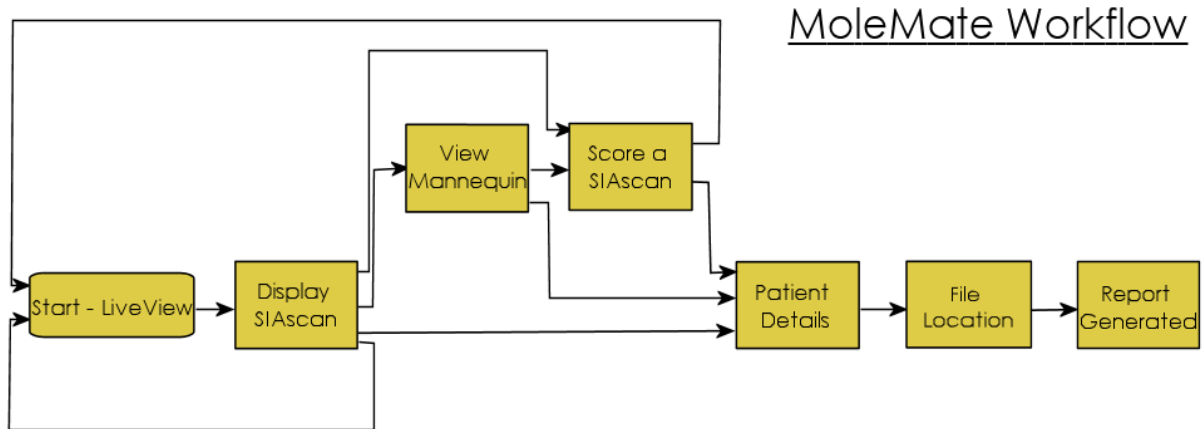
The flow chart shows the following paths through MoleMate once the SIAscan has been obtained.

- The lesion can be scored and then have a report generated.

- The scoring feature can be skipped and the lesion can simply have a report generated.

- The SIAscan can be scored and then discarded without having a report generated and MoleMate will return to the **Start Live View** screen.

- The SIAscan can simply be discarded and MoleMate will return to the **Start Live View** screen.

The paths shown and described through the MoleMate software are the main work flow to achieve a result quickly. However once a SIAscan has been acquired it is possible to navigate to other parts of the software by **Clicking** on the navigation buttons to go to the required feature.

1.3. MoleMate Function Buttons

The buttons giving access to the features are shown below.

When the MoleMate software is in use hover over a button with the mouse to display a **Tool Tip**. This will display information about what each of the buttons does.

Each of the buttons is accessible by using the navigational functionality of the SIAscope V button. The button border will change from Gold to Blue to indicate which button is currently selected. When the button border is Blue pressing the button marked SIA on the SIAscope V or **Left clicking** on the button with the mouse will open this feature.

1.4. The Minimise Button

When the **Minimise** button has been clicked MoleMate will be minimized only and not closed. This means the software will still be running in the background so that it can be accessed quickly when it needs to be used again. When MoleMate is restored the last page that was being used will be displayed.

To use this feature **Click** on the **Minimise** button, MoleMate will minimise. To restore MoleMate either press the button marked **SIA** on the SIAscope V or locate the MoleMate icon in the **System Tray** in the lower right hand corner of your desktop and **Left click** on it, MoleMate will be restored. **Right Clicking** on the MoleMate icon will display a list. Choose from the options displayed in the list by **Clicking** on them.
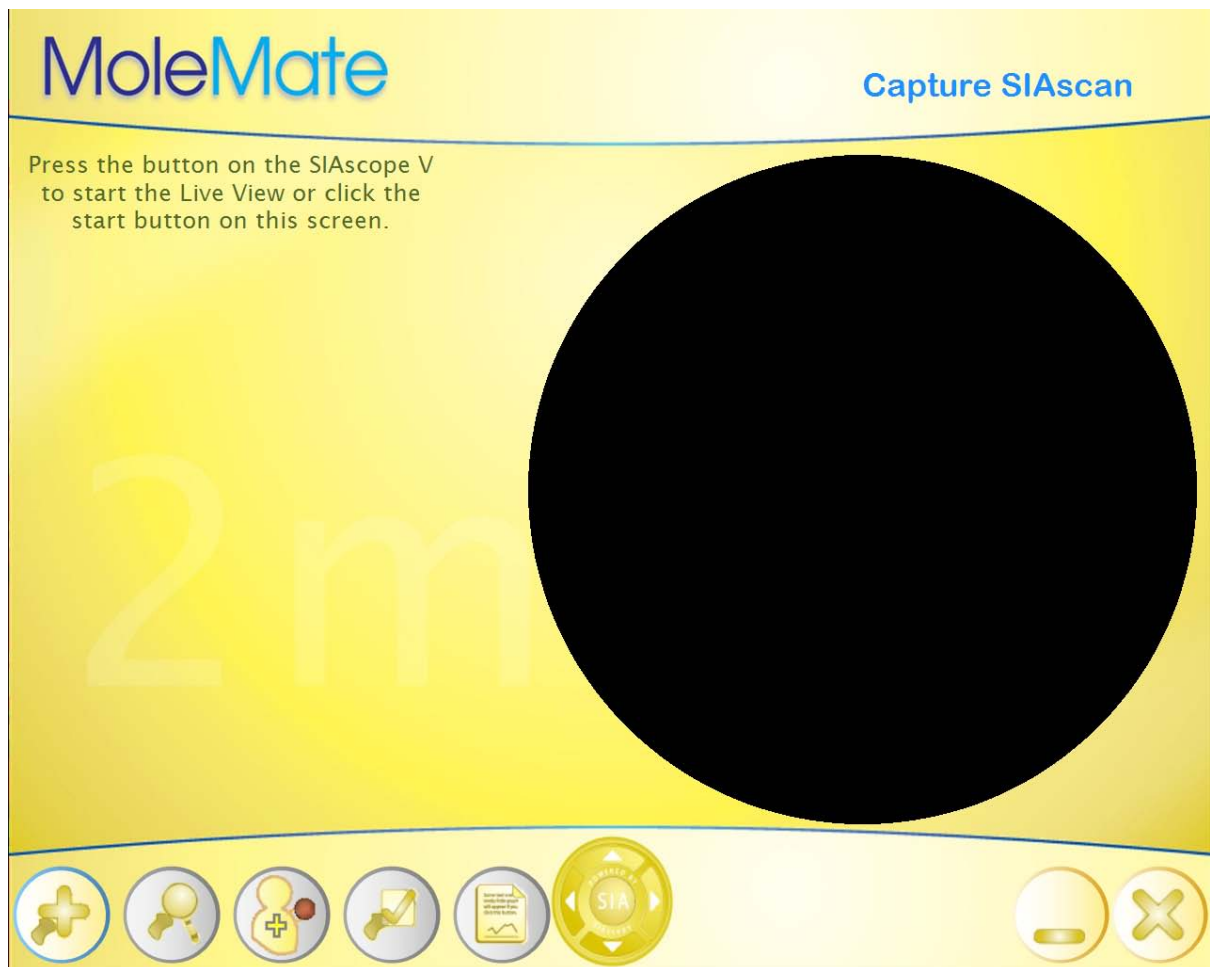
2. Starting MoleMate

To start the software **double click** on the MoleMate icon located on the Computer being used.

MoleMate Icon

The software will take a few moments to initialise. The screen displayed is the starting point for capturing a SIAscan. At this point the SIAscope V is in sleep mode (Not Active).

To begin the process of capturing a SIAscan go the section Capturing a SIAscan.

3. Capturing a SIAscan

The starting point for capturing a SIAscan is always from the screen displayed in the previous section. At this point the SIAscope V is in sleep mode (Not Active). To obtain a live view from the SIAscope V press the button marked SIA on the handset. The White LED's will start to flash and if the SIAscope V is placed on the skins surface a live colour view will be displayed on the screen. Use the live view to position the SIAscope V so that the lesion being scanned is in the centre of the view.

⚠ Important

Remember to apply matching fluid to the area being examined before capturing the SIAscan

🛑 Warning

Do not apply matching fluid to open wounds or sores.
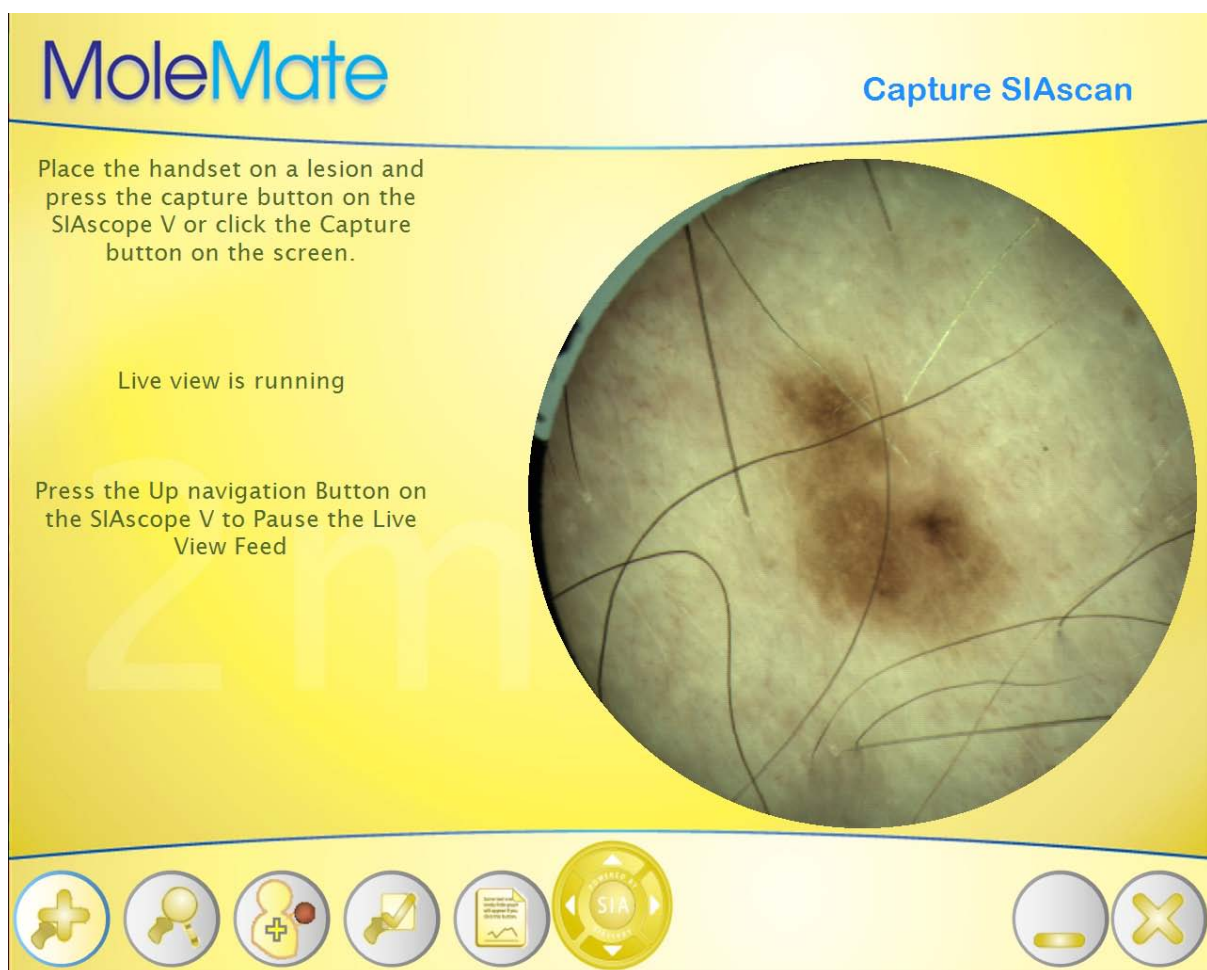
At this point it is possible to either:

Pause the live view on the screen and then capture the SIAscan. To do this press the **Up** button on the SIAscope V, a message will appear on the screen to confirm the pause is active. To reactivate the live view press the **Up** button again. When ready to capture the SIAscan press the middle button marked SIA on the SIAscope V. The processing of the images will take a few moments and messages on the screen will confirm the progress being made. Once complete the SIAscan will be displayed in the viewing screen.

Capture the SIAscan without pausing by pressing the middle button marked SIA on the SIAscope V. The processing of the images will take a few moments and messages on the screen will confirm the progress being made. Once complete the SIAscan will be displayed in the viewing screen.

The SIAscan viewing page displays all of the chromophores for the captured SIAscan. The large view displays the currently selected chromophore and as default the colour view is always displayed first. To switch the chromophore to be viewed choose the one required from the smaller images by using the navigational buttons located on the SIAscope V and then pressing the middle button marked SIA, the large view will be updated. **Left clicking** with a mouse will also update the large view.
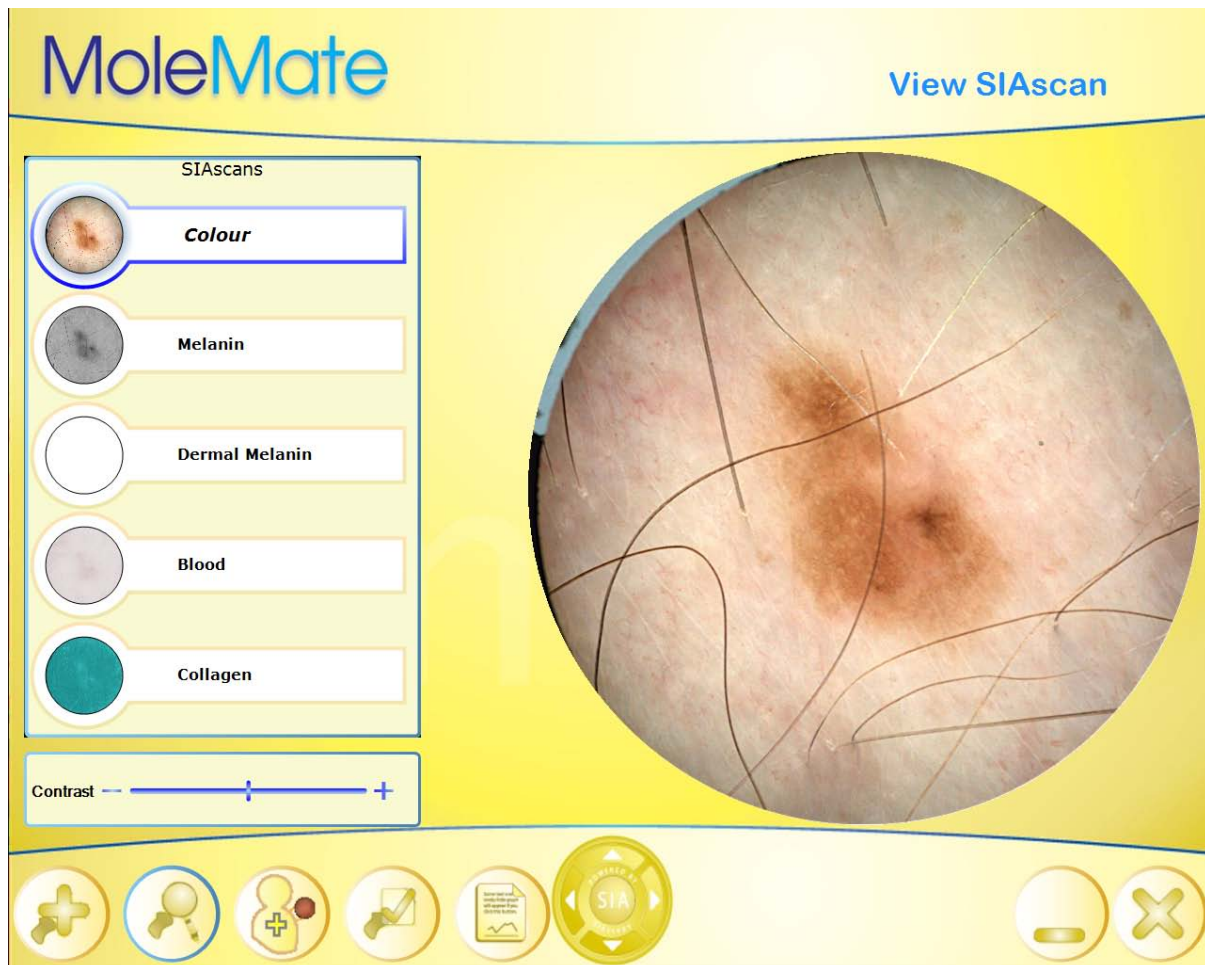
The contrast setting for large view can also be adjusted by **Clicking** on the Contrast adjustor bar.

Once the SIAscan has been viewed it is possible to:

Create a lesion location on the Mannequin - A lesion can be created on the mannequin to identify its location. This will be included the report when it is generated. To open the mannequin feature navigate to the **View MoleMate Mannequin** button and **Click** on it, the mannequin page will be displayed. For help on using the mannequin go to the section MoleMate Mannequin.

Score the Lesion - Using the MoleMate scoring system it is possible to obtain a score for the lesion. To open the scoring system navigate to the **Score SIAscan** button and **Click** on it, the scoring system will be displayed. For help on using the scoring system go to the section Scoring a SIAscan.

Generate a Report - A report containing the SIAscan, a score if one has been created and some basic patient information can be generated using the MoleMate software. To open the report tool navigate to the **Report** button and **Click** on it, the Report page will be displayed. For help on using the report tool go to the section Generating a MoleMate Report.

Discard the SIAscan - To discard the SIAscan navigate to the **Capture a new SIAscan** button and **Click** on it. The software will return to the MoleMate start page and the SIAscope V will be in sleep mode. If another SIAscan is not going to be captured, MoleMate can be left running and when ready the SIAscope V can be activated and a new SIAscan captured as detailed in the section Capturing a SIAscan.

4. MoleMate Mannequin

This feature allows a lesion to be marked on the mannequin. This mannequin image is then added to the report that is generated for the patient. This will help to identify the lesion location at a later date.
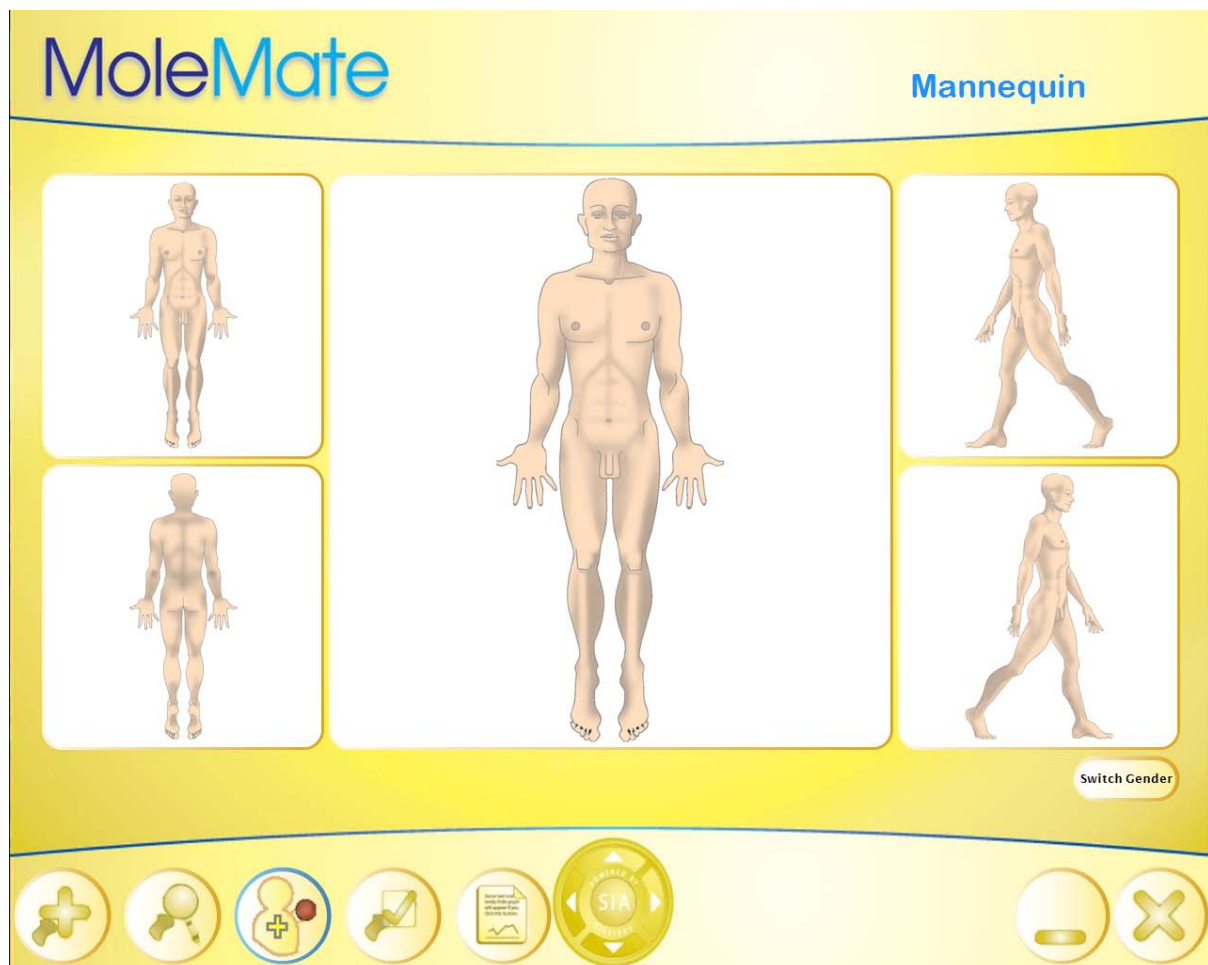
☞ **Note**

If a lesion location is not identified on the mannequin the report that is generated will display text confirming that this was not done.

4.1. Marking a lesion on the Mannequin

Begin by choosing the gender of the mannequin. As default the male mannequin will be displayed. To change the gender **Click** on the **Switch Gender** button located on the page.

If required change the view of mannequin. This is done by **Clicking** on the smaller mannequin views located around the edge of the large central view. The central view will be updated to reflect the choice made.

☞ **Note**

Lesions may only be added to the large central view of the mannequin.

Finally position the lesion on the mannequin. Move the mouse pointer over the central mannequin, the mouse pointer will change to a cross hair. When the cross hair is in the correct position **Click** on the mannequin.
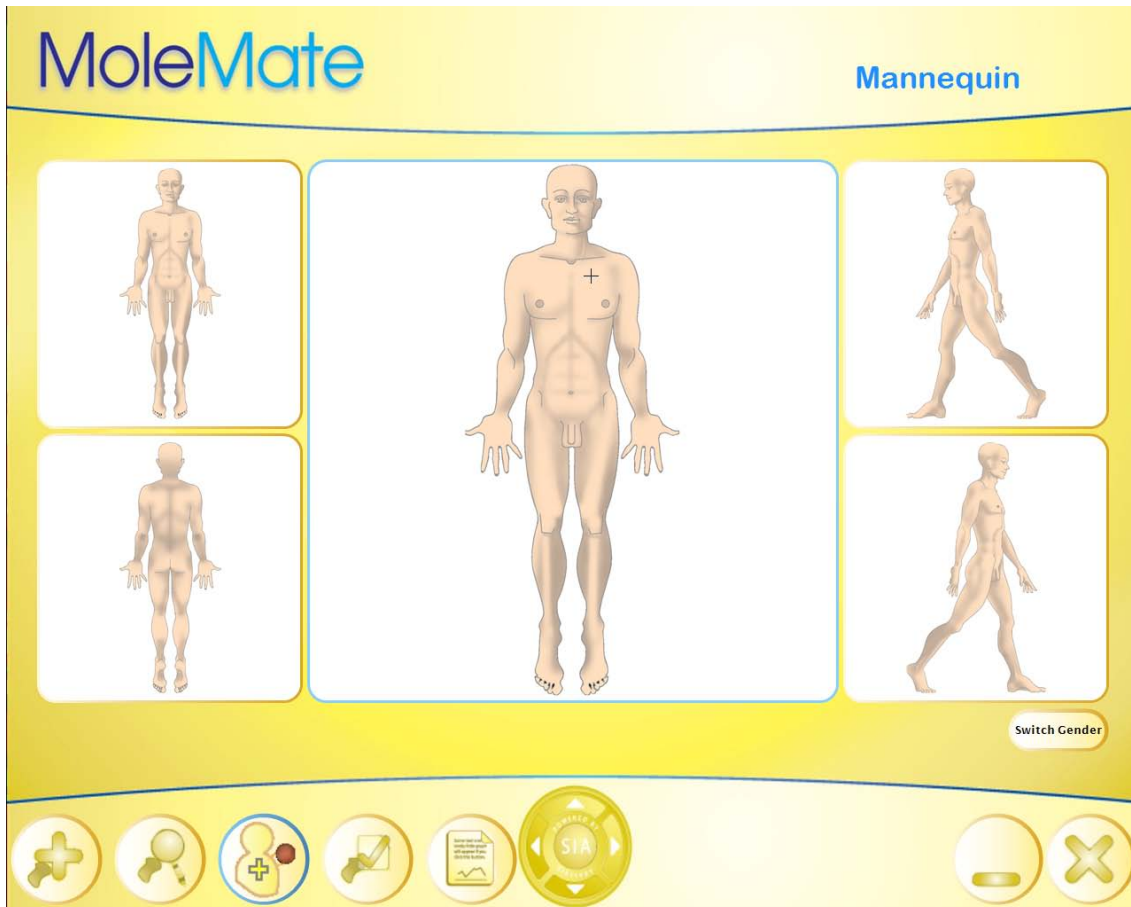
The position will be identified with a green marker.
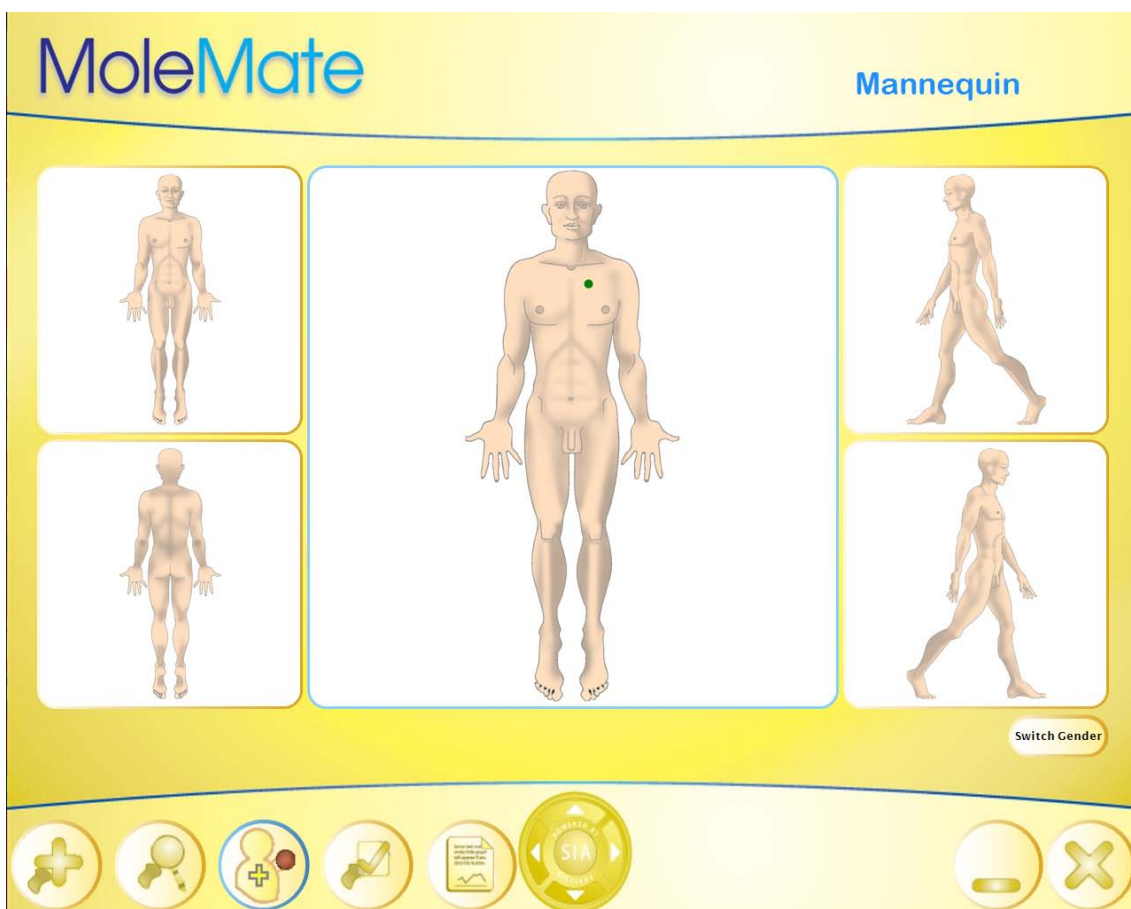
Now that the lesion is identified either proceed to score the lesion or generate a report.
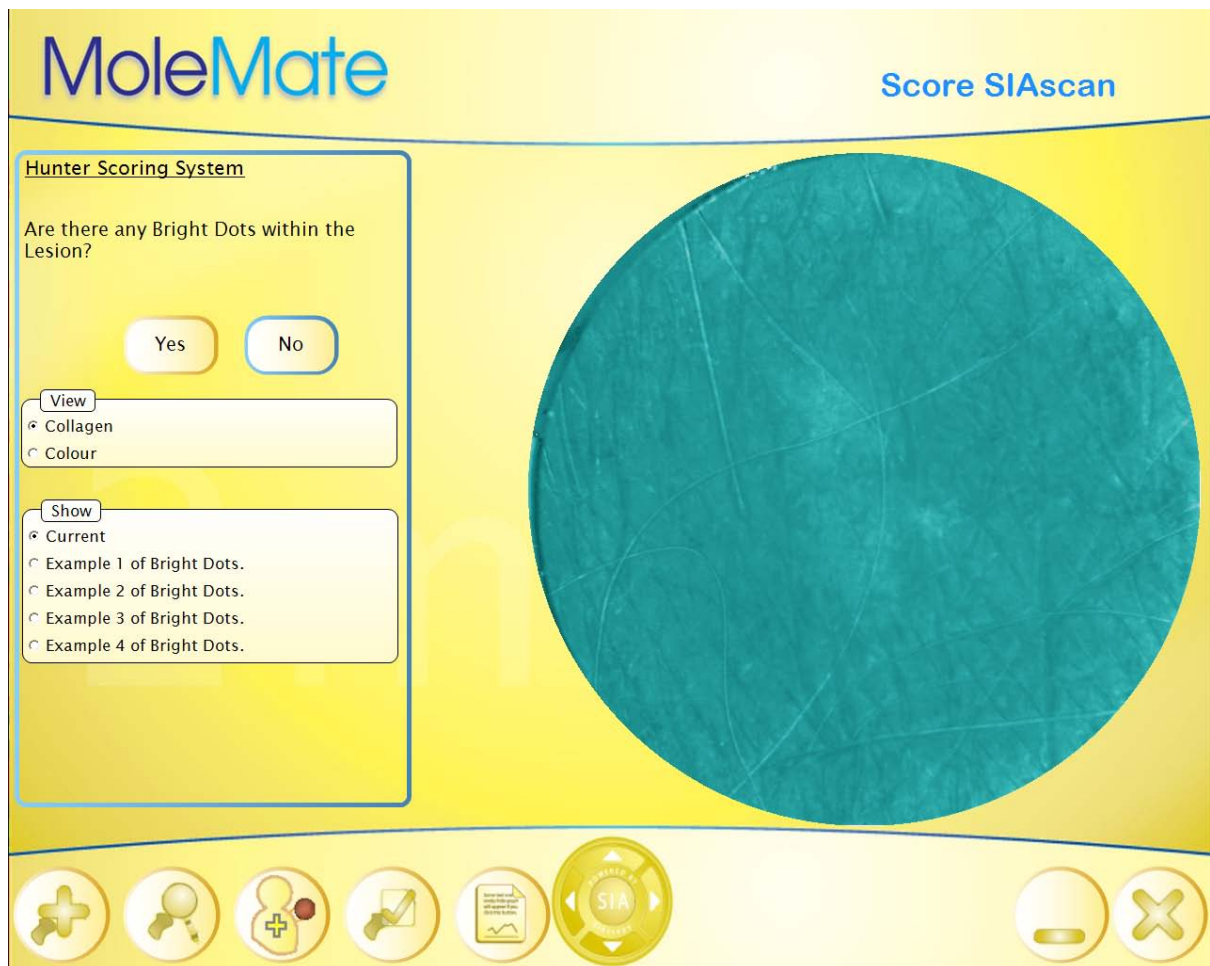
5. Scoring a SIAscan

The scoring tool will automatically display the correct chromophore to the question being asked. In order to proceed through the scoring tool select the appropriate answer to the question, this will automatically load the next one.

The Hunter Scoring System (Primary Care SIAscopy algorithm) is shown below. This shows the decision making path and outcome along with how a score is calculated and is taken directly from the poster associated to the scoring system.
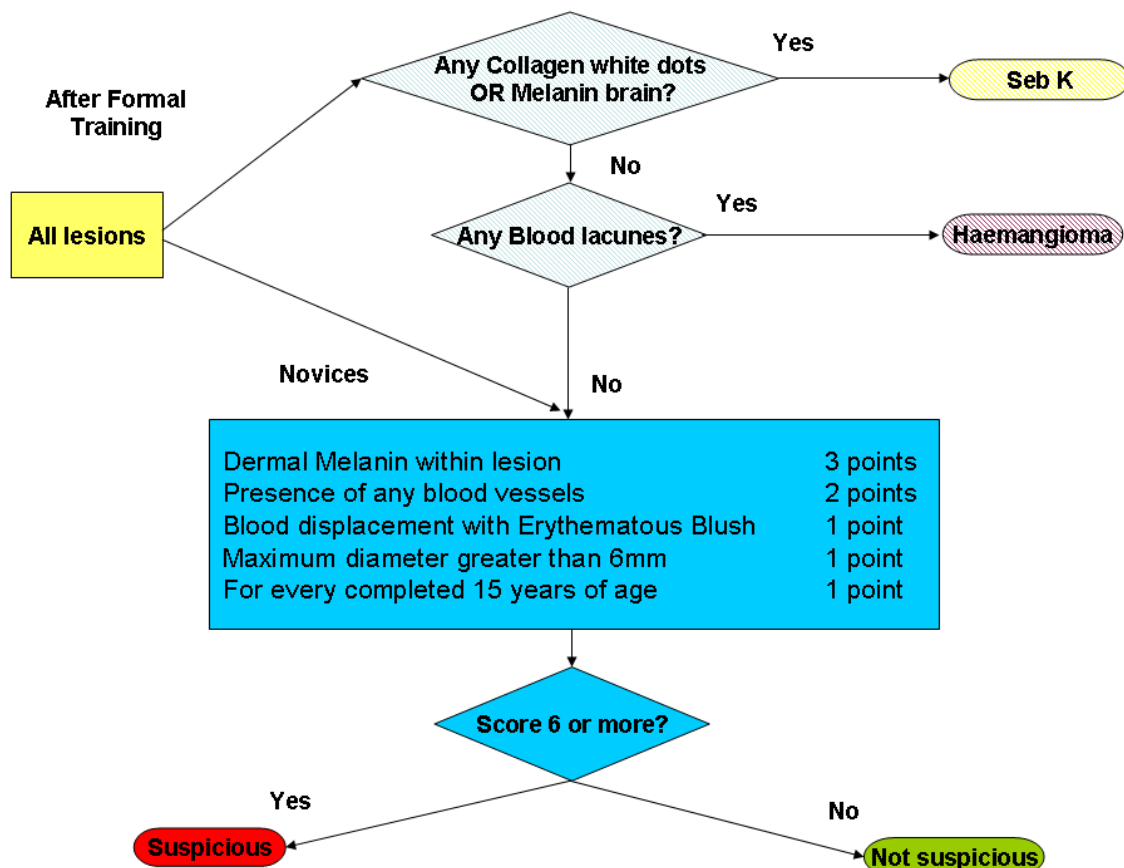
For each question a set of example SIAscans has been provided for reference. To access an example SIAscan navigate to the **Example 1** button. This will display the example image on the screen in place of the patients SIAscan, repeat as necessary for the other example images. To return to the patients SIAscan **Click** on the **Current** button.

MoleMate

Hunter Scoring System

Are there any Bright Dots within the Lesion?

[Yes]   [No]

View
- ⦿ Collagen
- ○ Colour

Show
- ⦿ Current
- ○ Example 1 of Bright Dots.
- ○ Example 2 of Bright Dots.
- ○ Example 3 of Bright Dots.
- ○ Example 4 of Bright Dots.

Also included within the scoring system are sets of clinical images that help to aid the diagnostic process. If a feature has been positively identified by clicking on the **Yes** button a set of clinical images will be displayed.

⚠ Important

The clinical images will only be displayed if Yes is answered to questions one, two or three.
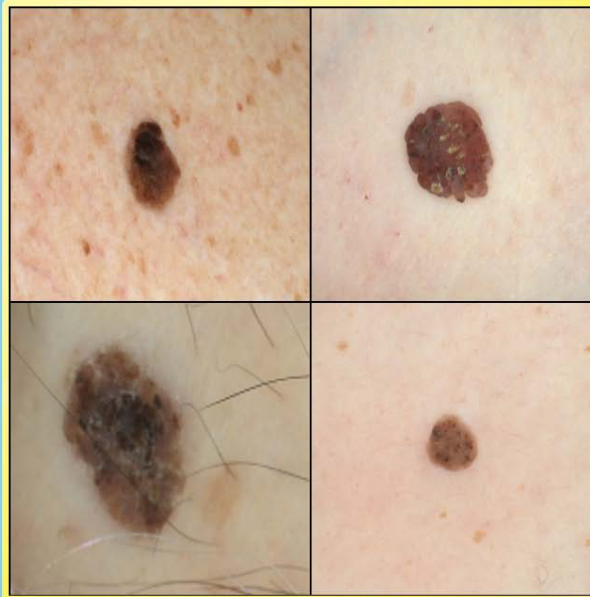
Use the **Left** and **Right** arrow buttons to move through the images. Then confirm the selection by **Clicking** on the **Yes** or **No** buttons. The Yes button will display the recommendation the No button will return to the scoring system and the next question.

Depending on the answers given the scoring tool will provide a recommendation on the screen, when this is done the scoring of the lesion is complete.

Recommendation

The Lesion Score is : 0

The features identified suggest that the lesion is Not Suspicious.

If the the history of the lesion is uncertain, lesion monitoring or specialist referral may be considered.

The score evaluated for a lesion is between 1 and 12. A score of 6 or greater suggests the lesion is suspicious.
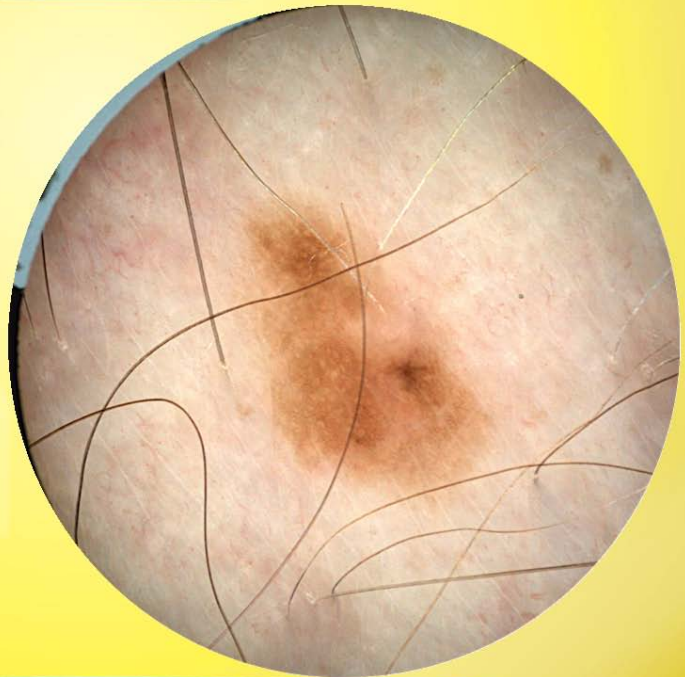
When a recommendation has been completed it is possible to:

Generate a Report - To generate a report of the lesion which will include the score created for it **Click** on the **Report** button.

Capture a New SIAscan - To discard the SIAscan and its score **Click** on the **Capture a New SIAscan** button. MoleMate will return to the start screen and the SIAscope V will go into sleep mode.

Re-score the lesion - To re-score the lesion **Click** on the **Score** button again.

View the SIAscan - To view the SIAscan again **Click** on the **View the SIAscan** button.

6. Generating a MoleMate Report

The MoleMate Report will generate a PDF document containing some basic patient information and notes, a lesion location if one has been added to the mannequin, a score if one has been created and the SIAscan that has been captured on that occasion. The report template can be personalised and instructions on how to do this can be found in the section Personalising the Report Template.

When selected the MoleMate Report page will be displayed. It consists of a series of text boxes to gather the patient information and to add any notes which will be included in the report. To enter text into any of these fields, **Click** inside the one needed and type in the text.

Also displayed will be the results of any score created using the MoleMate scoring tool. If a score has not been created then a message will display this. If a score needs to be created **Click** on the **Score** button, this will open the scoring tool. Any details entered into the Report page will be lost as a result of this.

The clinic details can also be edited if required by **Clicking** on the **Clinic Details** button. Edit the text as required by clicking inside the text box and then **Click** on the **Save** button to keep the changes.

Next select the type of report to be generated. There are two choices available:

Simple report - Generates two pages, one displays the patient and clinic details. The other displays all of the SIAscan chromophores along with a score if one has been generated on one page.

Detailed report - Generates six pages, the first displays the patient and clinic details. The remaining five display each chromophore (Color, Blood, Melanin, Dermal Melanin and Collagen) on a separate page along with a score if one has been generated. A scale is also displayed so that an idea of the size is available.

Either of these can be chosen by **Clicking** on the **Radio Button** for the required one. The radio buttons can be found to the right of the **Additional Notes** area.

Once the Report page is complete **Click** on the Generate report button. A window will pop up requesting that a location be specified for the report to be saved to. Once chosen **Click** on the **OK** button. The report will be completed and displayed on the screen. It can now be stored on the local Computer or printed out.

Once the PDF Report has been closed it is possible to:

Score the Lesion - If a score has not been generated in error it can still be done by **Clicking** on the **Score** button to return to the scoring tool. The SIAscan captured previously will automatically be loaded. Any details entered into the Report page text fields will be lost.

Capture a new SIAscan - If the examination of the lesion is complete **Click** on the **Capture a New SIAscan** button and MoleMate will return to the start page and the SIAscope V will go into sleep mode.

Reprint the Report - The same Report can be generated again if needed by **Clicking** on the **Generate Report** button and repeating the process.

View the SIAscan - To view the SIAscan again **Click** on the **View the SIAscan** button.

7. Personalising the Report Template

When the report is created MoleMate uses a default template to generate the report. It is possible to modify the template slightly to use a logo of your choice. The logo used in the default template is the Astron Clinica template. To change this logo follow the instructions below.

Begin by creating your own logo using your chosen software package. In order for the new logo to appear correctly it must meet the following criteria.

- The filename must be Logo.png - Consult your software package on how to save the image as a png file.

- The image width must not exceed 300px.

- The image height must not exceed 74px.

Once the image has been created it must be copied to the root directory of the MoleMate software. On default installations this will usually be C:\Program Files\Astron Clinica\MoleMate1.0. Place the image inside and start the software and generate a report. The new logo will be displayed in the report.

8. Acknowledgements and Notices

A. Revisions

Table A.1. Revisions

Revision No	Revision Description	Date
Revision 0.1	First draft composed	24.05.2006
Revision 0.2	Final version for printing	01.09.2006
Revision 0.3	Mannequin feature instructions added.	01.05.2007