Appendix B1L Participant Information Sheet L

PLEASE READ THIS INFORMATION SHEET

Title: A STUDY IN PRIMARY CARE OF NOMELA®, AN IMAGING ANALYSIS TECHNOLOGY, TO EXCLUDE CUTANEOUS MELANOMA

NOMELA® C5

We would like to invite you to take part in a research study being carried out by your general practitioner and Dr Girish Gupta, Consultant Dermatologist, University Hospital Monklands.

Before you decide, you need to understand why the research is being done and how it would involve you. Please take time to read the following information.

Background and purpose of the study Most moles are not serious but an important small number are serious and malignant (melanoma). The clinical load on health services from moles which may be suspicious of malignancy is substantial but a large number of those referred to hospital are considered by the specialist dermatologist to be benign by inspection without even a need for skin biopsy.

This study will evaluate a novel photographic image analysis test, nomela®, using iOS technology from Moletest Ltd., which may reduce the need for referral to a specialist.

Why have I been invited? You have been invited to take part because you have a pigmented mole which your general practitioner has decided to refer for a specialist dermatology opinion.

Do I have to take part? You do not have to take part. It is up to you to decide. This Information Sheet describes the study. You can ask further questions if you need to clarify anything or have any other concerns. We will then ask you to sign a consent form to show you have agreed to take part.

If you to agree to participate you are free to withdraw at any time without giving a reason. This will not affect the standard of care you receive.

What will happen to me if I agree to take part? Around the time your doctor decides to refer you to the specialist dermatologist the only extra activity that will happen is a nomela® test using a specially prepared iPad to test your mole. You will still be offered an out-patient appointment to see the dermatologist with standard photographs to be taken at the Medical Illustration Service. Your routine care, including mole removal if indicated, will not be affected.

Benefits There will be no direct benefit to you at present. If this technology is found to be useful then it enables specialist dermatologists and general practitioners to support its wider use in primary care.

Risks There is essentially very little risk associated with taking part in the study. Whether you take part or not in the study, the dermatologist that you will see may consider that removal of the mole is needed to clarify the diagnosis. This will be explained separately at the hospital and a separate consent will be obtained.

Confidentiality Information you provide, or is collected about you for the duration of this study, will be kept strictly confidential and will not be directly associated with your identifiable personal information. In order to verify the diagnosis, and only for this purpose, your NHS number/CHI will be retained by Moletest (Scotland) Ltd for up to 6 months from the date of the nomela® test (as advised by the UK Information Commissioner's Office). The security of the information held has been approved by the NHS IT security authorities.

Results The results of this study will be published in suitable medical journals and presentations may be made at relevant medical conferences. Your name and personal details will never be revealed. You will be able to request a summary of the results of the study from the Dermatology Department in Lanarkshire if you wish.

Follow-up We will wish to check whether the diagnosis of your mole(s) has been a melanoma by reviewing your medical records.

Research team, Sponsor and funders

- Dr. Girish Gupta, Consultant Dermatologist and Lead for Skin Cancer, NHS Lanarkshire and Dr. Frances Gallagher Consultant Pathologist, NHS Lanarkshire are the Principal Investigators.
- Dr. Christopher Mackintosh, Medical Director, NHS South Lanarkshire Health and Social Care Partnership is Co-investigator.
- The study is Sponsored and funded by Moletest (Scotland) Ltd.
- The data will be analysed by medical statisticians at the University of Aberdeen.

Who has reviewed this study? This study has been reviewed and approved by an independent NHS Research Ethics Committee in the UK.

Concerns If you have a concern about any aspect of this study please discuss this with your general practitioner/clinical practice nurse/the clinical research nurse in the first instance who will do their best to answer your questions.

In the unlikely event that something goes wrong and you are harmed during the research, and this is due to someone's negligence, then you may have grounds for legal action for compensation against the Sponsor and/or NHS Lanarkshire, but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

Withdrawal If you wish to withdraw from the study at any time, you may do so without giving a reason. The iPad photographs of your mole and any data we have collected specifically for the study will be destroyed and removed from the analysis. Please see Contact for further information below.

PLEASE KEEP YOUR COPY OF THIS INFORMATION SHEET

Contact for further information: If you have any further questions or concerns about the study please contact: Clinical Research Nurse, Dept. of Dermatology, Monklands Hospital *or* Dr Girish Gupta, Consultant Dermatologist, University Hospital Monklands t: 01236 712349 girish.gupta@lanarkshire.scot.nhs.uk

16 January 2018

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Appendix B2L Consent Form L

Participant Consent Form: nomela® C5

Title: A STUDY IN PRIMARY CARE OF NOMELA®, AN IMAGING ANALYSIS TECHNOLOGY, TO EXCLUDE CUTANEOUS MELANOMA

Principal Investigator: Dr Girish Gupta,
Consultant Dermatologist, University Hospital Monklands, NHS Lanarkshire

please initial all 5 boxes below

1) I confirm that I have read and understand the Participant Information Sheet dated **16 January 2018** for the above named study. I have had the opportunity to consider the information, to ask questions and have had these answered satisfactorily. ☐

2) I understand that the only procedure in this study is the nomela® test which is a photograph of my mole(s) of concern. This should take about 5 minutes. The test and photographs will be labelled with a unique number and no additional personal information will be requested for the study. The photographs and related study data will be stored securely on an NHS approved computer. A copy may be kept with my confidential medical record.

3) I understand that my participation is voluntary. I am free to withdraw at any time without giving any reason and without my medical care or legal rights being affected. If I choose to withdraw then the nomela® test of my mole(s) will be destroyed and not used. ☐

4) I understand that relevant sections of my medical notes and data collected during the study may be looked at by authorised individuals from NHS Lanarkshire, the University of Aberdeen, the Sponsor [Moletest (Scotland) Ltd.], regulatory authorities and auditors where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

5) I agree to take part in the above named study: ☐

_____

Name of Participant Date Signature

_____

Person taking Consent Date Signature

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Appendix B1P Participant Information Sheet P

>>insert local NHS local logo

PLEASE READ THIS INFORMATION SHEET

Title: A STUDY IN PRIMARY CARE OF NOMELA®, AN IMAGING ANALYSIS TECHNOLOGY, TO EXCLUDE CUTANEOUS MELANOMA

NOMELA® C5

We would like to invite you to take part in a research study being carried out by {your general practitioner} and Dr Toby Chave, Consultant Dermatologist, Plymouth NHS Hospitals Trust.

Before you decide, you need to understand why the research is being done and how it would involve you. Please take time to read the following information.

Background and purpose of the study Most moles are not serious but an important small number are serious and malignant (melanoma). The clinical load on health services from moles which may be suspicious of malignancy is substantial but a large number of those referred to hospital are considered by the specialist dermatologist to be benign by inspection without even a need for skin biopsy.

This study will evaluate a novel photographic image analysis test, nomela®, using iOS technology from Moletest Ltd., which may reduce the need for referral to a specialist.

Why have I been invited? You have been invited to take part because you have a pigmented mole which your general practitioner has decided to refer for a specialist dermatology opinion.

Do I have to take part? You do not have to take part. It is up to you to decide. This Information Sheet describes the study. You can ask further questions if you need to clarify anything or have any other concerns. We will then ask you to sign a consent form to show you have agreed to take part.

If you to agree to participate you are free to withdraw at any time without giving a reason. This will not affect the standard of care you receive.

What will happen to me if I agree to take part? Around the time your doctor decides to refer you to the specialist dermatologist the only extra activity that will happen is a nomela® test using a specially prepared iPad to test your mole. You will still be offered an out-patient appointment to see the dermatologist with standard photographs to be taken at the Medical Illustration Service if requested by your doctors. Your routine care, including mole removal if indicated, will not be affected.

Benefits There will be no direct benefit to you at present. If this technology is found to be useful then it enables specialist dermatologists and general practitioners to support its wider use in primary care.

Risks There is essentially very little risk associated with taking part in the study. Whether you take part or not in the study, the dermatologist that you will see may consider that removal of the mole is needed to clarify the diagnosis. This will be explained separately at the hospital and a separate consent will be obtained.

Confidentiality Information you provide, or is collected about you for the duration of this study, will be kept strictly confidential and will not be directly associated with your identifiable personal information. In order to verify the diagnosis, and only for this purpose, your NHS number/CHI will be retained by Moletest (Scotland) Ltd for up to 6 months from the date of the nomela® test (as advised by the UK Information Commissioner's Office). The security of the information held has been approved by the NHS IT security authorities.

Results The results of this study will be published in suitable medical journals and presentations may be made at relevant medical conferences. Your name and personal details will never be revealed. You will be able to request a summary of the results of the study from the Dermatology Department NHS Plymouth Hospitals Trust if you wish.

Follow-up We will wish to check whether the diagnosis of your mole(s) has been a melanoma by reviewing your medical records.

Research team, Sponsor and funders

- Dr. Toby Chave, Consultant Dermatologist and Lead for Skin Cancer, Plymouth NHS Hospitals Trust is the Principal Investigator, with Dr. Dean Harmse Consultant Pathologist, as Co-Principal Investigator.
- The study is Sponsored and funded by Moletest (Scotland) Ltd.
- The data will be analysed by medical statisticians at the University of Aberdeen.

Who has reviewed this study? This study has been reviewed and approved by an independent NHS Research Ethics Committee in the UK.

Concerns If you have a concern about any aspect of this study please discuss this with your general practitioner/clinical practice nurse/the clinical research nurse in the first instance who will do their best to answer your questions.

In the unlikely event that something goes wrong and you are harmed during the research, and this is due to someone's negligence, then you may have grounds for legal action for compensation against the Sponsor and/or Plymouth Hospitals NHS Trust, but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

Withdrawal If you wish to withdraw from the study at any time, you may do so without giving a reason. The iPad photographs of your mole and any data we have collected specifically for the study will be destroyed and removed from the analysis. Please see Contact for further information below.

PLEASE KEEP YOUR COPY OF THIS INFORMATION SHEET

Contact for further information: If you have any further questions or concerns about the study please contact: Clinical Research Nurse, Dept. of Dermatology, Derriford Hospital, Plymouth *or* Dr Toby Chave, Consultant Dermatologist, Derriford Hospital t: 01752 432190 e: toby.chave@nhs.net

16 January 2018

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Appendix B2P Consent Form P

Participant Consent Form: nomela® C5

Title: A STUDY IN PRIMARY CARE OF NOMELA® AN IMAGING ANALYSIS TECHNOLOGY TO EXCLUDE CUTANEOUS MELANOMA

>>insert local NHS local logo

Principal Investigator: Dr Toby Chave, Consultant Dermatologist, Derriford Hospital, Plymouth NHS Hospitals Trust

please initial all 5 boxes below

1) I confirm that I have read and understand the Participant Information Sheet dated **16 January 2018** for the above named study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2) I understand that the only extra procedure in this study is the taking of an additional photograph of each of my moles under investigation and that this should take an extra 5 minutes or so. The photographs will be labelled with a unique number and no additional personal information will be requested for the study. The photographs and related study data will be stored securely on an NHS approved computer in the University of Aberdeen. A copy will be kept with your confidential medical record. ☐

3) I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my medical care or legal rights being affected. If I choose to withdraw the additional photographs of my mole(s) and study data will be destroyed. ☐

4) I understand that relevant sections of my medical notes and data collected during the study may be looked at by authorised individuals from NHS Lanarkshire, the University of Aberdeen, the Sponsor [Moletest (Scotland) Ltd.] and regulatory authorities and auditors where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

5) I agree to take part in the above named study: ☐

_____

Name of Participant Date Signature

_____

Person taking Consent Date Signature

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Appendix B3 Usability Assessment: Form 1

Moletest Scotland
developer of nomela®

Usability Form 1

Primary Care

C5: **A STUDY IN PRIMARY CARE OF NOMELA®, AN IMAGING ANALYSIS TECHNOLOGY, TO EXCLUDE CUTANEOUS MELANOMA**

Please complete this form

Name of User: …… (*block capitals*)

General Practitioner☐ Practice Nurse☐ Medical Photographer☐ (*tick as appropriate*)
Other: ……

Region: SW England☐ Lanarkshire Scotland☐ (*tick as appropriate*)

Please tick 'Yes' or 'No' and add notes if needed

Question	Yes	No	Notes
Was the work flow built into nomela® clear and understandable?			
Did you wish to avoid the work flow at any stage?			
Did you succeed in avoiding the work flow?			
Was it easy to focus the close-up of the suspect lesion?			
Was the screen size suitable for checking focus?			
Was the screen size suitable for cropping?			
Were the inbuilt notifications helpful in retaking images when necessary?			
Was the 'Live Edge Detection' easy to understand and use?			

Question	Notes
Do you have any suggestions to improve 'live' feedback to users of nomela®?	
Can you suggest any further improvements to make nomela® easier to use?	

Date: Signature:

Please return this form on completion to:
bruce.murray@moletest-scotland.com

Appendix B3 Usability Assessment: Form 2

Moletest Scotland
developer of nomela®

Usability Form 2
Secondary care

C5: **A STUDY IN PRIMARY CARE OF NOMELA®, AN IMAGING ANALYSIS TECHNOLOGY, TO EXCLUDE CUTANEOUS MELANOMA**

Please complete this form

Name of Dermatologist: ..... (*block capitals*)

Region: SW England ☐ Lanarkshire Scotland ☐ (*tick*)

Please tick 'Yes' or 'No' and add notes if needed

Question	Yes	No	Notes
Was the location for the suspect lesion clear from the nomela® report?			
Did you access the original image of the lesion captured by nomela®?			
What else would be helpful for nomela® to report?			

Date: Signature:

Please return this form on completion to:
bruce.murray@moletest-scotland.com

Appendix C1

Items for
List of Cases and Abbreviated List of Cases

<u>List of Cases at NHS sites</u>

CHI / NHS number *
* the CHI/NHS number is removed to form the Abbreviated List sent to the University of Aberdeen for statistical analysis

nomela® reference

diagnostic category
1 not melanoma
2 melanoma
3 uncertain diagnosis
9 no information available

histopathology diagnosis if performed
not melanoma =1
melanoma =2
melanoma superficial spreading =2.1
nodular melanoma =2.2
lentigo maligna melanoma =2.3
acral lentiginous melanoma =2.4
indeterminate =2.5

<u>Abbreviated List of Cases at University of Aberdeen</u>

nomela® reference

diagnostic category
1 not melanoma
2 melanoma
3 uncertain diagnosis
9 no information available

histopathology diagnosis if performed
not melanoma =1
melanoma =2
melanoma superficial spreading =2.1
nodular melanoma =2.2
lentigo maligna melanoma =2.3
acral lentiginous melanoma =2.4
indeterminate =2.5

nomela® test result ** *by secure download to University of Aberdeen*
= no evidence of melanoma <u>or</u> =melanoma not excluded

Appendix C2

Study spreadsheet (draft)

List for NHS clinical site

CHI /NHS number	nomela® reference	not melanoma =1	histology not melanoma =1	histology melanoma =2 {2.1,2.2,2.3,2.4,2.5}	uncertain diagnosis =3	no information =9
0	0	0	0	0	0	0

Abbreviated List for statistical analysis

	nomela® reference	not melanoma =1	histology not melanoma =1	histology melanoma =2 {2.1,2.2,2.3,2.4,2.5}	nomela® result =X	nomela® result =Y	not congruent 2=X	congruent 2=Y
0	0	0	0	0	0	0	0	0

Appendix D1 **Instructions for the nomela® test**

	Document Title	Document Number.
moletest UK	**Instructions for Image Capture: Clinical Study C5**	Protocol-009
		Revision 04

Pre-test Assessment:

The following lesions are not considered suitable for **nomela®**:

- pigmented moles smaller than 5mm diameter
- moles obscured by hair or tattoos
- moles in the mouth, eyelid, nailbed, genital and perianal areas
- ulcerated lesions
- non-pigmented moles which may be the amelanotic form of melanoma
- lesions likely to be basal cell carcinoma, squamous cell carcinoma, Merkel cell tumours, lymphoma, metastatic carcinoma

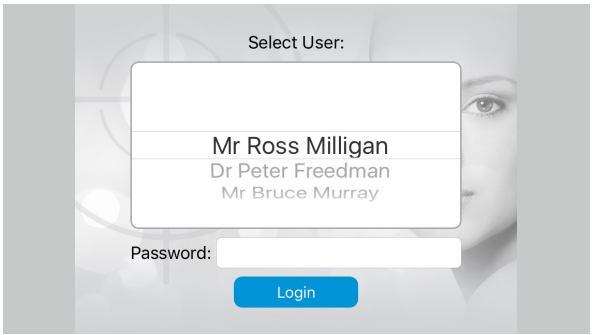
1. Starting nomela® ready for test

POWER UP iOS

SELECT: *nomela® icon*

2. Select site user

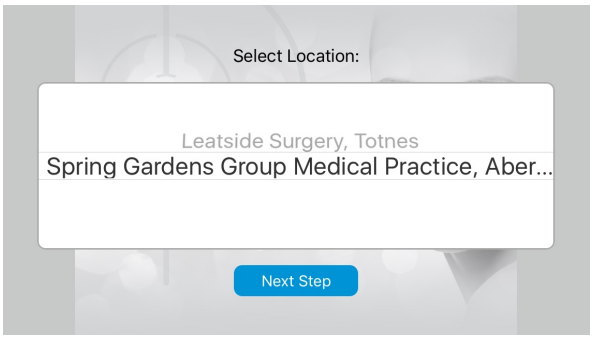
At this screen select your **name** from the scrolling list, so it is highlighted between the lines in the text box, and enter your password.



PRESS: 'Login'

2.1 Select site location

At this screen select your **location** from the scrolling list, so it is highlighted between the lines in the text box.



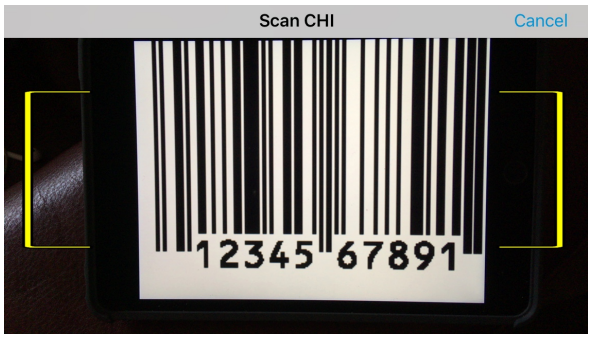
PRESS: 'Next Step'

3. Scan the CHI number

PRESS: '*Scan*'

Scan the patient barcode, the preferred method as this eliminates typographical errors.

Position Patient CHI Number Barcode within yellow lines and the app will read the number and enter this in the CHI number text box. This will return you to the previous screen (2) but with the CHI number in now in place.



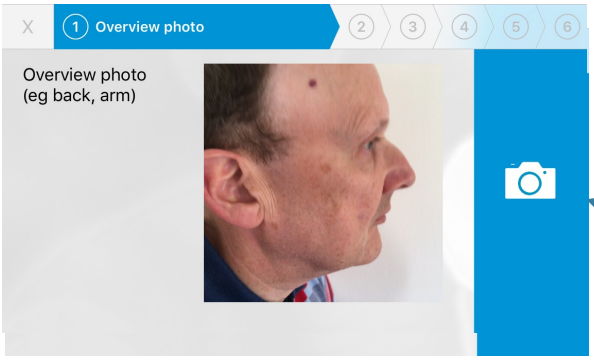
3.1 Keyboard Use

If there is no barcode to scan then the CHI number can be entered manually using the device keyboard.

PRESS: *'Start new*

4. Establish location with overview image

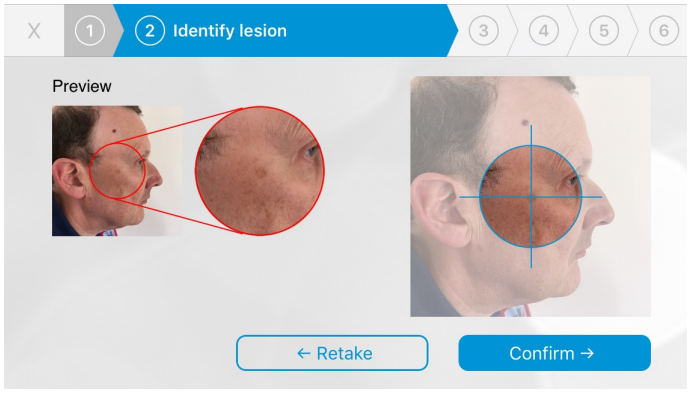
Record an image of the area where the lesion (or lesions) that is to be tested, thus aiding identification. Normal room lighting from ceiling lights or a window is all that is required. You may find it helpful to have the patient lie on an examination couch for some views.



PRESS: *Camera*

5. Select Lesion to be tested

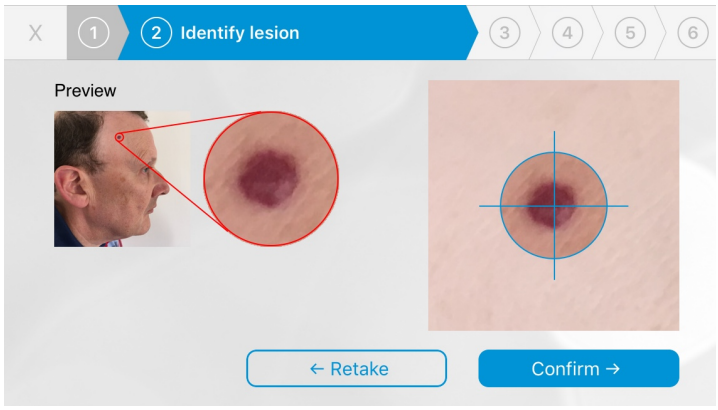
If the image does not clearly show lesion locations then retake at this stage.



OPTION: *Press*

6. Position Cross-hairs

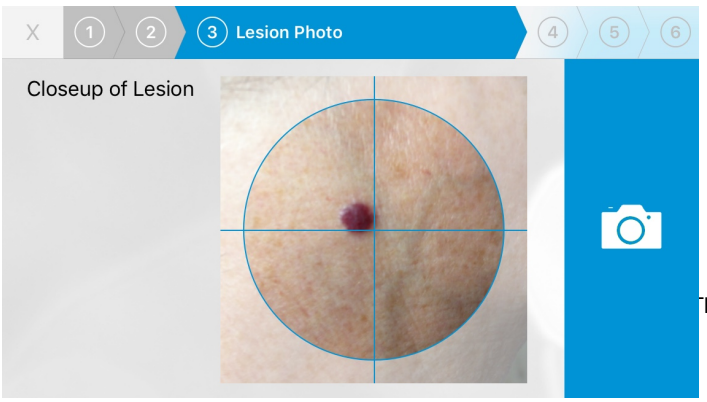
If happy with the image in Section 4, position the cross-hairs over the lesion by using the 'pinch to zoom' feature to fill the frame with the lesion ensuring the circle is clear of the edge of the lesion.



OPTION: *Press*

PRESS: *'Confirm'*

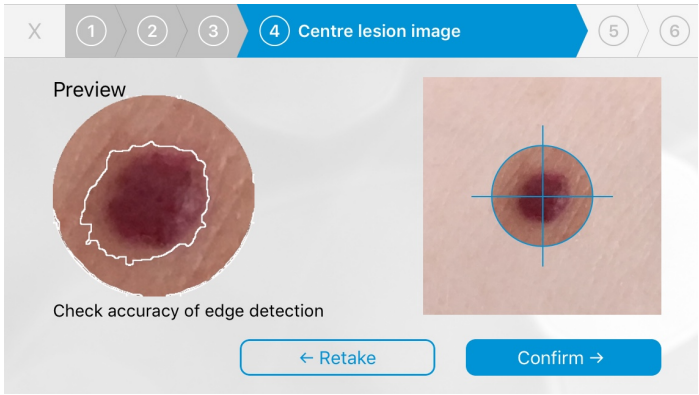
6.1 Closeup of lesion



PRESS: *Camera*

6.2 Edge detection

Check the edge detection accuracy and adjust using 'pinch to zoom' if necessary. A clean solid white line around the lesion is needed.

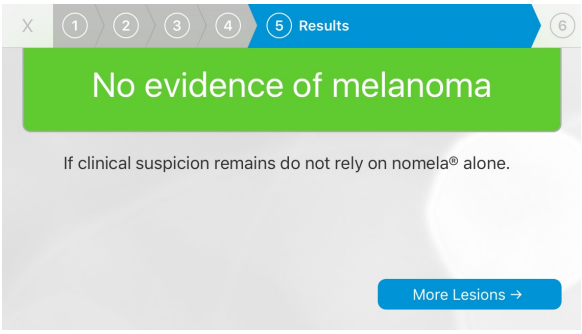


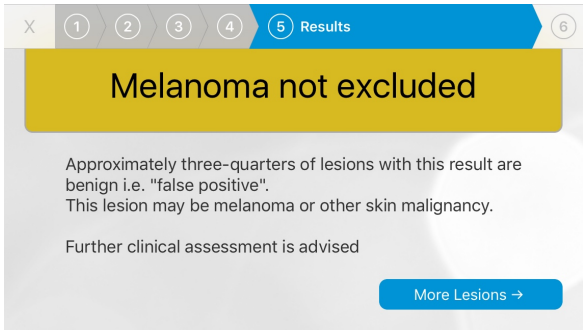
OPTION: *Press*

PRESS: *'Confirm'*

7. Results Screen

Two results are possible shown by a screen with either a 'green' or 'amber' bar.

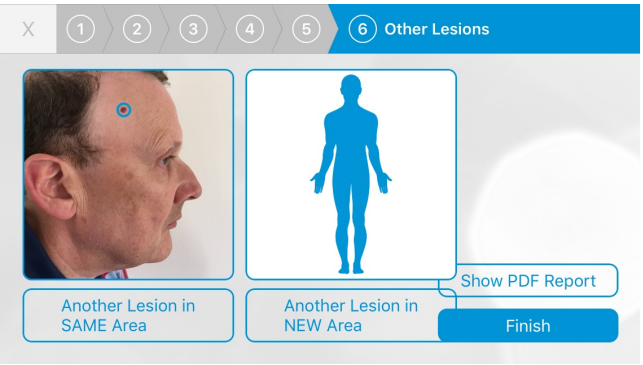




Press: *'More Lesions'*

8. Test additional lesions

First lesion is circled in location view. If second lesion is in same area press ‘SAME Area’ box or if in a new area press ‘New Area’ box and repeat

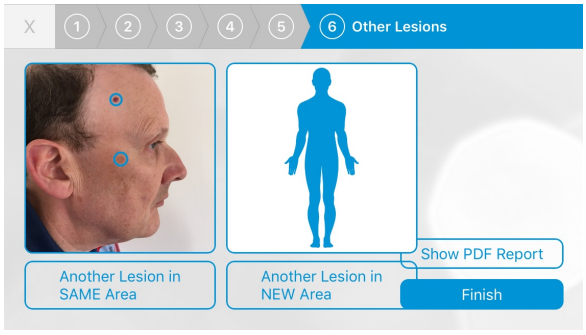


OPTION: *Press*

OPTION: *Press ‘Show PDF*

8.1 Identify further lesions

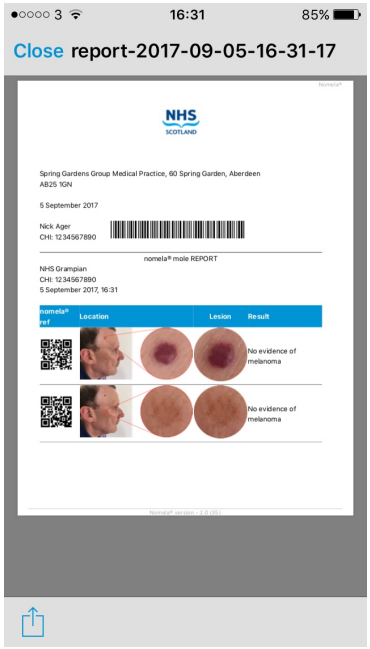
Repeat steps 4 to 7.



OPTION: *Press*

OPTION: *Press ‘Show PDF*

9. PDF Report



If there are no further examinations in this session, just close *nomela*® and it will reopen at the device Home Page.

Appendix D2

Information technology: statements re security of transmission and storage

1. Statement by Moletest (Scotland) Ltd. on the handling of Data (2017).

The Moletest nomela® technology is a professional medical device. Patient identifiable information is minimised to use of the Community Health Index (CHI) or NHS number. Except for a brief period before upload, no information is retained on the hand-held iOS device.

i) The images obtained using nomela® ensures accurate identification of the location of the lesion by capture of a regional image (the overview) without ambiguity linked to a close-up focused image that is then cropped circularly, typically to around 1.5cm diameter.

ii) Certain lesions are not considered suitable for nomela®, including moles in the mouth, eyelid, nailbed, genital and perianal areas, thereby obviating confidentiality concerns in this respect.

(see section 4.3.3.2 of nomela® C5 study protocol).

iii) Image capture by nomela® does not use the iOS embedded Camera App nor link with Camera Roll or Photo Stream.

iv) The nomela® technology stores and analyses the images within a temporary secure cache on the iPad until a secure WiFi or 4G link is established leading to immediate and complete upload as a ZIP File using HTTPS to a secure NHS approved Moletest server. The memory cache is then cleared so that no images or data are retained on the iPad.

v) nomela® generates a universally unique identifier (UUID) for each lesion which is linked to the CHI/NHS number for accurate linkage to the nomela® report output which in turn is transmitted to the approved NHS EPR system and shown on reports by use of a QR code.

vi) The patient id, which is itself encrypted, and the nomela® reference are linked in a separate store.

vii) The statistical analysis of the results will not include any patient identifiable information.

viii) Moletest (Scotland) Ltd uses Amazon Web Services (AWS) servers which are all based in the London region. AWS and Moletest (Scotland) Ltd provide assurance that data remains in the UK.

The AWS infrastructure used is compliant with the 17 requirements for a Commercial Third Party as described in the NHS Digital (HSCIC) Information Governance Toolkit. This also applies to the server software built by Moletest (Scotland) Ltd on-top of the AWS infrastructure.

https://aws.amazon.com/compliance/eu-data-protection/

https://d0.awsstatic.com/whitepapers/compliance/Using_AWS_in_the_context_of_UK_Healthcare_IG_SoC_process.pdf

ix) Connectivity to NHS electronic patient records is via the NHS N3 portal.

2. Statement by IT Departments NHS Lanarkshire Acute Health Board and NHS Lanarkshire Health and Social Care Partnership

3. Statement by IT Departments Plymouth Hospitals NHS Trust and Primary Care

Appendix E Schedule of Events

nomela® C5 schedule of events

	in primary care			**in secondary care**		
	lesion1	lesion2 if present	lesion3 if present			
visit	1	1	1			
inclusion criteria	*	*	*			
exclusions	*	*	*			
Participant Information Sheet	*					
Consent Form	*					
nomela® test (1 - 3 minutes per lesion)	*	*	*			
check test is uploaded	*	*	*			
search diagnosis (dermatology) by EPR				*		
search confirm melanoma diagnosis (histopathology) eg by monthly reports				*		
add diagnosis to List of Cases				*		