Pathway guideline:
Naevus Referral Filtering & Monitoring

An end-to-end service pathway, integrated with the hospital eye service, to support the early identification of choroidal melanoma and deliver naevus monitoring, where required.

The pathway aims to improve the efficiency and accuracy of case-finding of choroidal melanoma, and so improve the speed at which people are diagnosed and treated within the hospital eye service. The pathway provides a convenient out of hospital / virtual alternative for patients for both initial assessment and monitoring.

Practitioners are expected to consider the MOLES score and the College of Optometrists Clinical Management guidelines

The MOLES scoring system was developed by Prof. Bertil Damato to help practitioners differentiate choroidal melanomas from naevi, estimate the risk of malignancy and to manage patients accordingly.

Referrals / Entrance Criteria

For patients who have signs suggestive of melanocytic choroidal tumour or a suspicious choroidal neavus.

Referrals may be following a sight test (or within an extended primary eyecare service such as Optometry First), routine diabetic retinopathy screening or from another health care professional.

Referrals may be redirected into the pathway following referral management / clinical triage by a referral hub / care co-ordination service or at the request of the hospital eye service for baseline assessment.

The pathway accepts referrals with or without a MOLES score.

Note: It is advisable that practitioners referring into the pathway have access to the MOLES scoring criteria, to help them identify lesions that require urgent action.

Triage and Risk Stratification

Referrals will be triaged to an optical practice delivering the pathway. Where practicable, peripheral lesions should be directed to a practice with access to Widefield fundus imaging. Referrals very likely to be a melanoma should be fast tracked direct to the Ophthalmology/Oncology team, following local protocol.

Referrals without sufficient clinical data to apply the MOLES scoring will be directed into a practice for baseline assessment, to include MOLES scoring.

MOLES scoring

- **M**ushroom shape
- **O**range pigment
- **L**arge size
- **E**nlargement
- **S**ubretinal fluid

Outcome:

- **Discharge (Score 0)** - Common naevus: patients should be given information (ideally written or a web link) on naevi and advice on self-care, including regular sight tests.
- **Direct to optometry practice (Score 1&2)** Low and High-Risk Naevus or insufficient clinical data: Direct patients for baseline assessment at optometry practice.
- **Direct referral (Score 3 or more)** Probable melanoma: Urgent referral to Ophthalmology / Oncology team following local protocols requesting an appointment within 2 weeks.

Note: On receipt of the referral, the Ophthalmology / Oncology team at the local hospital eye service may subsequently request baseline assessment from Optometry service This should be arranged within 2 weeks and prioritised over score 1 referrals.

Baseline Assessment

Appointment to be offered within 2 weeks of receiving the referral.

Initial assessment and differential diagnosis by the assigned practitioner, including:

- Full ocular and medical history
- Visual Acuity assessment
- MOLES Score
- Dilated slit-lamp indirect biomicroscopy

- Imaging & SD-OCT (spectral domain optical coherence tomography) scan of lesion

Note: Imaging by fundus autofluorescence (FAF) is not a requirement of the service but may be helpful, if available.

The MOLES practitioner should have access to advice and guidance (A&G) from the hospital ophthalmology/oncology team to support decision making in cases of uncertainty. However, this should not delay referral; lesions score 3 or above should be assumed to be a melanoma until proven otherwise.

Peripheral lesions require a volumetric OCT when outside of the macula centered field of view (ranging from 30 – 55 degrees).

If OCT acquisition is not possible, single line or raster scans may be suitable, however lesions beyond the range of the OCT should be managed within the hospital service. In such circumstances, referrals into the hospital service should provide a reason for the lack of an image, to prevent the referral being put on hold while an image is requested.

Virtual review – ophthalmologist or delegated reviewer

Imaging review within two weeks of baseline assessment.

The assessment information will be reviewed virtually by an ophthalmologist (or their delegated reviewer) and the results communicated back to the optometry service and copied to the patient, their GP, and the original referrer.

Virtual review will be performed on 100% of care episodes with MOLES score 2 and above, and a proportion of care episodes score 1 for quality assurance.

Assessment / Virtual review outcomes:

- **Discharge** Common naevus / low risk (score 0). Give reassurance, information on naevi and advise on self-care, including regular sight tests
- **Monitor within optometry service** (confirmed score 1 or 2). Patient transferred to the optometry service for monitoring. The management plan will indicate the diagnostic assessments required and recall interval, including when to discharge.
- **Refer** Probable melanoma (score 3 or more). Patient referred urgently to ophthalmology/oncology team, following local protocols, for further assessment and management.
- **Refer** Image quality not satisfactory. In-person hospital assessment required

Monitoring

Patients confirmed with a naevus may require monitoring for clinical change.

It will be the decision of the hospital team to identify which patients are suitable for monitoring in primary care. Suitable patients will be transferred with an individual management plan inclusive of images and indicating a recall interval, usually 6 or 12 months depending on risk stratification.

The Optical practice will recall the patient to ensure they are seen within 2 weeks of their assessment due date. Any patients who fail to attend their monitoring assessment will be contacted and a further appointment arranged. Patients who fail to attend this further appointment will be referred to the ophthalmology / oncology team, with a copy of the re-referral letter sent to the Patient and their GP.

Monitoring Assessment

Ideally to be performed within 2 weeks of the advised assessment date.
Assessment to be performed in line with individual management plan, will normally include:

- Review ocular and medical history
- Visual Acuity
- MOLES score
- Dilated slit-lamp indirect biomicroscopy
- Imaging & / or SD-OCT (spectral domain optical coherence tomography) scan of lesion

The appointment offers an opportunity to discuss the patient's condition with them. Patients should always be able to discuss their concerns and questions.

Optometrists with suitable experience will be expected to identify a change in clinical status and advise on the appropriate outcome, providing the necessary support and advice to the patient. Virtual review on a proportion of care episodes will provide the necessary quality assurance.

Monitoring outcomes:

- **Discharge to self-care:** There is no change in clinical status and the patient is discharged in line with their management plan. Alternatively, following virtual review, the ophthalmology/oncology team (or delegated reviewer) advises that continued

monitoring can cease. Patients should be given reassurance, information on naevi and advice on self-care, including regular sight tests.

- **Recall to Optometry Service:** No change in clinical status, continued monitoring in line with management plan. OCT stable & VA as expected. Recall under the current management plan and reiterate advice on self-care.

- **Request virtual review** - Advice and Guidance (A&G). Change in clinical status and / or uncertainty requiring specialist opinion.

- **Refer to Ophthalmology/Oncology -** Change in clinical status requiring referral (MOLES score 3 or more).

Patient support and advice

Whatever the clinical outcome, it is likely that a discussion regarding the choroidal melanoma and naevus will be needed. The discussion should be tailored to the person's individual needs and current level of knowledge allowing enough time to discuss the person's concerns and questions.

All patients should be informed of any pigmented fundus lesions and ideally provided with an information sheet and a photograph of the lesion. Information should also be provided for the patient to take away or receive electronically, including copies of imaging.
If the patient is being referred, this information should include:

- information about choroidal melanoma and local pathways, including timescales
- key contact details – for example, who to contact if appointments are not received or need to be altered
- advice about what to do and where to go if vision deteriorates
- copies of imaging exams
- a warning not to cancel or postpone their appointment

Patients should be encouraged to attend routine sight-tests with their usual optometrist.

Information about the service should be made available so the person understands how to self-refer into the service if their vision changes.

Appendix 1

Risk Factor	Severity	Score
Mushroom shape	Absent	0
	Unsure/Early growth through RPE	1
	Present, with overhang	2
Orange pigment	Absent	0
	Unsure/Trace (i.e., dusting)	1
	Confluent clumps	2
Large Size*	Thickness < 1.0 mm ('flat/minimal thickening') and diameter < 3 DD	0
	Thickness = 1.0 – 2.0 mm ('subtle dome shape') and/or diameter = 3-4 DD	1
	Thickness >2.0 mm ('significant thickening') and/or diameter >4 DD	2
Enlargement**	No growth or no previous ophthalmoscopy	0
	Unsure growth / 'new' lesion not documented after previous ophthalmoscopy/ v large	1
	Definite growth or new tumour confirmed with sequential imaging	2
Subretinal fluid	Absent	0
	Trace (if minimal, not extending beyond tumour, and detected only with OCT)	1
	Definite, seen without OCT, or extending beyond tumour margin	2
	Total Score:	
	***Tumour category**	
DD = disc diameter (=1.5 mm); *Ignore thickness if this cannot be measured; **Assume enlargement = 1 if thickness >3 mm or diameter >5 DD.		
***Categorise tumours according to total score: 0=Common naevus; 1=Low-risk naevus; 2=High-risk naevus and >2=Probable melanoma.		