



Dysplastic naevi

Patient fact sheet

What is a naevus?

A naevus (pronounced 'neev-uss'; plural is naevi 'neev-eye') or mole is a benign (noncancerous) growth that occurs on skin. Naevi can occur on any part of the body and, as they contain melanocytes (cells that produce melanin pigment), they can range in colour from quite pale through to very dark brown or even black.

There are many different types of naevi and they are categorised by where they are on the skin, when they developed (congenital: a mole that you are born with, or acquired: a mole that appears later), and whether or not they are typical or atypical moles. For instance, there are common naevi, blue naevi, junctional melanocytic naevi, intradermal naevi, compound naevi, and halo naevi as well as many others.

Why does a doctor remove a lesion and send it to pathology?

The colour or shape of a lesion does not necessarily mean that it is malignant (cancerous). However, as skin cancers, like naevi, are varied in their appearance, your doctor will want to make sure that what appears to be a naevus is not a skin cancer. When your doctor is making a clinical assessment of a naevus, they will consider a number of things that together make that naevus clinically suspicious. Your doctor may decide that it is appropriate to remove the naevus and send it to a pathology laboratory for assessment.

At the laboratory, a histopathologist (a medical doctor with specialist training) will look at the cells that make up the lesion, and the skin tissue that surrounds it, to determine if it is of concern, and if the area that it was taken from needs further treatment. They will send a report to your doctor.

What is a dysplastic naevus?

Dysplastic naevi are benign (noncancerous) growths of melanocytes.¹ When looking at the cellular structure of a naevus under the microscope, the histopathologist has seen that there is abnormal development (dysplasia) of its cells. Depending on the extent of the abnormal development, they will grade the dysplasia as either 'low grade' or 'high grade'. This grading system was introduced by the World Health Organisation in 2018.

Do dysplastic naevi turn into melanoma?

There is no definitive answer at this time as research into dysplastic naevi is ongoing.

At one time it was proposed that there is a step-wise model of tumour progression from dysplastic naevi through mild to moderate, then severe dysplasia, and finally melanoma in situ.² At this time, although there is no evidence that dysplastic naevi are, in fact, 'common' precursors of melanoma, it cannot be definitely ruled out.²

There is a small sub-group of high grade dysplastic naevi that, when seen in association with melanomas, show similar genetic mutations as melanomas do in their evolution.¹

This suggests that some high grade dysplastic naevi are an intermediate between benign naevus and melanoma, and they should be completely excised.¹

When is it likely that a wider excision is needed?

In deciding what is best for you, your doctor will take into account your personal medical history, their clinical judgement and the pathology report.

They may decide that monitoring the site is the best way forward, or that a wider re-excision of the area around the lesion is necessary.

Does having dysplastic naevi mean a greater chance of developing melanoma?

Current thinking is that most dysplastic naevi do not progress to melanoma. However, it has been suggested that dysplastic naevi are a marker for increased risk of melanoma at another site. Therefore it is important to regularly attend your doctor for a routine skin check, as well as informing your doctor about any changing lesions.³

References:

¹ Elder DE, Massi D, Scolyer RA, Willemze R, editors (2018). WHO classification of skin tumours. 4th Ed. Lyon: IARC.

² Busam KJ, Gerami P, Scolyer RA (2019). Pathology of Melanocytic Tumors. 1st Ed. Philadelphia: Elsevier.

³ Elder DE. Dysplastic naevi: an update. Pathology. 2010; 56(1):112-120.